PHILOSOPHICAL AND PHYSICAL OPINIONS.

WRITTEN

By the Thrice Noble, Illuſtrious, and Excellent PRINCESS, the LADY

MARCHIONESS of NEWCASTLE.

LONDON,

Printed by WILLIAM WILSON, *Anno Dom.* M. DC. LXIII.

To the LADY MARCHIONESS

OF

NEWCASTLE,

On Her BOOK of

PHILOSOPHY.

WHat Numbers of Philoſophers did Write,
Puzling the World, to Know ſtill what was Right,
The more were Read, the more Confounded ſtill,
With Strange Opinions they Mankind did Fill,
Sailing in Nature's Ship, they ſtill were Toſs'd
On Unknown, Foaming Billows, they were Loſt,
Their Sails of Folly Torn, their Rudder Broke,
And all their Cables Slacken'd, Loſt their Hope;

Their

Their Judgments, Understandings, Drowned so,
Because they Writ of what they did not Know,
Were all but Guessers, then this LADY may
Write her Opinions, Better than all they,
And Set up for her Self, for all may find,
Reading her Book, 't will make them of her Mind,
So Rational, such Solid Judgments hight,
As all Wise Men will Swear, that it is Right.

WILLIAM NEWCASTLE.

TO

TO HIS

EXCELLENCIE

The Lord Marquis of

NEWCASTLE.

My Noble Lord,

SInce your Return from a long Baniſhment into your Native Country, retiring to a Shepheard's Life, I your Shepheardeſs was reſolved, to imploy all my Thoughts and Induſtry in good Huſwifry, knowing your Lordſhip had great Debts after your great Loſſes; and though I am as Induſtrious and Carefull to ſerve Your Lordſhip in ſuch imployments, which belong to a Wife, as Houſhold affairs, as ever I can, and not to be Sordidly baſe, which is a Vice, Your Lordſhip hates, yet I cannot for my Life be ſo good a Huſwife, as to quit Writing, to follow my Sheep ſo Carefully, but that they will go Aſtray ſome times; the truth is, I have ſomewhat Err'd from good Huſwifry, to write Nature's Philoſophy, where, had I been prudent, I ſhould have Tranſlated Natural Philoſophy into good Huſwifry; for Your Lordſhip, who hath as Deep Conceptions and Subtil Obſervation in Natural Philoſophy, and as Curious Fancies and Clear Diſtinguiſhing in Poetry, and as much Ingenuity to Arts as Speculation into Sci-

Sciences, yet you are in a manner forced, to lay them by, ſince your Return into your Native Country, imploying your Thoughts and Actions in helping to Repair your ruined Eſtate, that was cauſed by Croſs and Malicious Fortune, which, I have heard Your Lordſhip ſay, was never your Friend. 'Tis true, My Lord, I have obſerved, She hath been Cruel to you, but the Great God of Heav'n hath Favour'd you much, as to Keep you Safe in the days of Battel, to Provide for you in the times of Baniſhment, and to Return you into your Native Country and Company of your Dear Children, So that God hath rewarded your Honeſty, Fidelity, Virtue and Merits, although Fortune did oppoſe your Power, and hath almoſt ruined your Eſtate, which your Wiſdome will repair, as well as it can, and what cannot be, Your Lordſhip hath Patience to Suffer, which Patience is no Novelty to you, who hath had more Uſe of it, than moſt Men have had; But though Your Lordſhip hath many Troubles, great Cares, and much Buſineſs in your particular Affairs, yet you are pleaſed to Peruſe my Works, and Approve of them ſo well, as to give me Leave to Publiſh them, which is a Favour, few Husbands would grant their Wives; But Your Lordſhip is an Extraordinary Husband, which is the Happineſs of Your Lordſhips

Honeſt Wife and

Humble Servant

MARGARETA NEWCASTLE.

Noble Readers,

ALthough I have Indeavour'd in the Preface to hinder Objections which might be made, by Explaning some Terms which I use in this Work, yet I am Confident there will be more Senseless Objections made against it, than there are Real Faults in it, and this cannot be Avoided, for more Learned Works than mine have not escaped Censures. As for Terms, it cannot be expected but I must sometimes Err in the Proper Expression of them, since I have not Scholastical Learning; but although I may Err in Words, yet I am Confident, I do not Err in Sense and Reason, and dare Avouch to the World, that these my Philosophical Opinions have as much Sense and Reason as any that have been Written, as being Built upon the Ground of Sense and Reason. I have Cleared some Words in the Precedent Preface, according to that Sense I Use them in, but there may be many more, which seem Hard to my Readers, although I hope every one, who hath a Sound Fudgement, may easily Understand them. Thus when I speak of the Degrees of Matter, I desire my Noble Readers to know, that I mean Degrees in Quality and Quantity, not in the Substance and Nature of Matter it Self, as which is Simple, and always the Same, and cannot be

ſaid to have More or Leſs. Likewiſe when I diſcourſe of Creation, I do not Underſtand a Production out of Nothing, but a Production in Nature, as Nature Creates one thing out of an other, ſome may call it Generation; and many the like Words, which if I ſhould indeavour to Explane them all, it would be a great VVork, and not fit for the Preface, *which* Preface *I muſt deſire you, Noble Readers, to Peruſe before you begin the VVork it Self. I know very well, that my Opinions cannot be generally Received and Applauded, for as the Old Proverb ſays, So many Men ſo many Minds, and it is not likely, that all Men may Agree in one Mind or Judgement, and ſince, eſpecially in Natural Philoſophy, Opinions have Freedome, I hope theſe my Opinions may alſo Injoy the ſame Liberty and Privilege that others have, which without great Injuſtice no Body can Deny me.*

HIS

To the READER.

I Would not have troubled you with another Epiſtle, but ſince there is ſomething Left out, which I thought neceſſary to have been Inſerted in this Work, I muſt deſire your Leave to Inform you of it, and 'tis this: There may be in Nature More Senſitive Paſſages or Organs, than the Senſitive Organs in Animals, and not only More Senſitive Paſſages or Organs, but more Various; for though Animals cannot ſee Outward Objects without an Eye, yet certainly Nature can, and hath made Different Organs in Different Creatures, to preſent all the Several Objects or Creatures with their Several Effects to the Several Senſes of Several Creatures; for it is not probable, that the ſeveral Works in Nature can be in Obſcurity to moſt, and only be Divulged to ſome particular Sorts or Kinds of thoſe Infinite Creatures in Nature, which are the Infinite Parts of Nature, which is in the Infinite Matter of Nature, which cannot be ſo Obſcure, but is ſome ways or other ſubject to the Infinite Knowledge in Nature. But ſome may Object, that I ſay, that although Infinite matter is but as One Body, as being of One Nature, yet Motion divides that Body into Several parts, and as Parts are Particular, ſo Knowledge is Particular, for what is one Part is not another Part, no more than one Man is another Man, and the like may be ſaid for Knowledge. I anſwer, that all this is true, but Seve-

ral men may be Conſidered as One Man, and yet thoſe Several men are not that One Man; alſo there may be Cut or Ingraven in Several Sorts of Subſtances, and in One and the ſame, many Several Figures of one Man, yet thoſe Several Figures are not the Man, but ſo many Pictures of one Man, for Like and the Same is not all one thing; for though Nature may, and can make Infinite Repetitions of One and the ſame Creature, and make Infinite Creatures to be Like each other, as alſo to be of One Sort or Kind, yet Nature cannot make one Creature another, for every Part is of it Self, although every Part is of the Whole, and though Parts cannot be Single Parts of themſelves, being Individable from the Whole, yet what is one Part is not another Part: So for Senſitive Paſſages or Organs, as alſo their Intelligence and Knowledge, for Several Paſſages or Organs may inform or give Senſitive knowledge Several ways or Manner of ways, and yet it may be the Same Sort or Kind of Knowledge, and repreſent Several Prints or Pictures of One thing. ☞Alſo I muſt inform my Readers, that I have heard ſome ſay, Geometry to be the Ground of Natural Philoſophy, and not Natural Philoſophy the Ground of Geometry; we may as well ſay, ☞Art produceth Nature, and not Nature Art. But although it is probable, that ſome of the Opinions of ☞Antient Philoſophers in Antient times are Erroneous, yet not all, neither are all Modern Opinions Truths, but truly I believe, there are more Errors in the One, than Truth in the Other.

HIS

AN

EPISTLE

TO THE

READER.

Noble Readers,

TO Treat of Every particular Motion in Every particular Part of Every particular Creature, is beyond my Capacity, and to Treat of Some particular Motions in Some particular Parts of Some particular Creatures, is very Difficult for Me to do, having a Weak Body, and a Weak Mind, ſo that I Fear my Readers would think my Mind a Buſie Fool, and my Body an Idle Animal, if I ſhould Offer or Indeavour to do it; But howſoever, I am reſolved to Venture on their Cenſure, rather than Bury my Opinions in Oblivion. Wherefore, in this Work of mine you will find, not only my Former Philoſophical Opinions Enlarged, but much Reformed and Corrected; for though I

keep to the firſt Ground or Principle, that is, to Senſe and Reaſon, which is Life and Knowledge, yet I have indeavoured here to Build upon that Ground, not only a Larger, but a more Exact and Perfect Fabrick, wherein every Several Chapter, like Several Rooms, have as Much and as Clear Lights as I can give them, and if any Part ſhould ſeem Obſcure to my Readers, I ſhould be Sorry for't, for I can aſſure you, that all theſe Opinions ſeem Clear to my Conceptions, as alſo to my Senſe and Reaſon, though I do not know how they will ſeem to your Underſtanding, for they being New Opinions, never Broached before but by Me, are like New Extracts, Eſſences or Spirits, whoſe Subſtance is not eaſily Diſcerned or Found out, and therefore not Generally known of what Matter they were made, and I being a Woman Cannot, or if I could, it were not Fit for me Publickly to Preach, Teach, Declare or Explane them by Words of Mouth, as moſt of the moſt Famous Philoſophers have done, who thereby have made their Philoſophical Opinions more Famous, than I fear Mine will ever be; for though Writing and Printing Explanes the Text, yet it doth not ſo Clearly Expound it as Speech would do. But I am in Hope, this my Work will meet with Underſtanding Readers, to whom I Leave it.

Theology for the moſt Part is drawn out of Natural Philoſophy, witneſs the Arguers and Writers in Theology, for ſome Plead for the

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Præ-exiſtence of Men's Souls, ſome for their Tranſmigration, others for their Creation, whereof ſome are *Pythagoreans*, and others *Ariſtoteleans*, and ſo they Talk and Write of God's Actions, according to *Pythagoras*'s, *Plato*'s, or *Ariſtotle*'s Opinions, which is Ridiculous, ſince God's Decrees or Actions are not to be Known, and therefore not to be Diſputed; neither can they Tell whether Divine Souls be Corporeal, or Incorporeal, or how God will Diſpoſe of ſuch Divine Souls as are above Natural Matter, Cauſes, and Effects. But, Noble Readers, I deſire you will take Notice, that I meddle not with the Particular Divine Souls of Men, but only the General Soul of Nature, which I name the Rational matter, neither do I inſiſt only upon the Particular Life of Mankind, but the General Life of Nature, which I call or name the Senſitive matter, both which is Animate matter; neither do I Treat only of the Bodies of Men, but of the Body of Nature, which I name the Inanimate matter, all which is the Infinite matter of Nature, that is, the Soul, Life, and Body of Nature, the Senſitive and Rational being the Quinteſſence, Spirit, or Purity of Nature, but the other Part a more Groſs and Senſeleſs matter. And as I do not meddle with the Divine Souls of Men, ſo I do not as many Men do, which Study, Argue, and Write much, to Prove there is a God, as alſo to Prove his Power, Will, or Decrees, all which is a Preſumption for Men to do, for Men cannot Prove,

what they cannot poſſibly Know, for God hath not given any One Creature, nor All Creatures, were they Joyned into One, a Sufficiency to Know him, and ſince God is ſo much Above Nature or Natural Matter, as I a Single Creature cannot Gueſs at Him, I will not Diſpute on Him, but Pray to that Incomprehenſible and Inexpreſſible Deity, to Favour me with that which is Beſt for me.

Thus, Noble Readers, you will find, that this preſent VVork contains Pure Natural Philoſophy, without any Mixture of Theology, for I have not Imitated the Philoſophers or Theologers of this Age, who do Mix one Sort with the other, for in my Opinion this Mixture doth Diſturb and Obſtruct their VVorks, wherein is neither Philoſophy nor Theology Clearly Argued or Declared by the VVriters, nor Clearly Underſtood by the Readers: Neither can Theology and Natural Philoſophy Agree, for Philoſophy is Built all upon Human Senſe, Reaſon, and Obſervation, whereas Theology is onely Built upon an Implicit Faith, which is an Undoubted Belief of that, which the Nature of the Creature cannot poſſibly Comprehend or Conceive, whilſt it is in this World, and in the State of Ignorance; Wherefore Poor Ignorant Man muſt reſt upon Faith, which is Beyond Human Senſe and Reaſon, until ſuch time as he hath a Glorifi'd Body and a Purifi'd Soul, in which Condition he may have a Perfect Knowledge, but in the mean time, whilſt he is in this

VVorld,

VVorld, it is a Folly to Diſpute, ſince neither Study nor Diſputation can Inform him, for Diſputations and Arguments do rather Deform Religion, than Inform the Creature; wherefore it is better to Pray than to Preach, to Believe than to Diſpute, the one will Reform Men from Vices and Combine them in Unity, the other will Bring Men into Atheiſm, or cauſe a Confuſion and Diviſion amongſt Mankind. But, Noble Readers, this VVork, as aforeſaid, is onely Natural Philoſophy, which will neither Obſtruct nor do Harm either to the Church or State, or to the Conſcience or Life of Man, but it may rather Inform Men, or ſhew them a Ground to Find out thoſe things which may be Convenient, Uſeful, and Profitable to the Life of Man; The Truth is, that without Natural Philoſophy Men could not tell how to Live; for Natural Philoſophy doth not onely Inſtruct Men to Know the Courſe of the Planets and the Seaſons of the Year, but it Inſtructs Men in Husbandry, Architecture, and Navigation, as alſo Combination and Aſſociation, but above all it Inſtructs Men in the Rules and Arts of Phyſick; indeed all Arts and Sciences are produced in on kind or other from Natural Philoſophy, inſomuch as it may be ſaid, Man Lives meerly by Natural Philoſophy, ſo that Natural Philoſophy is the Light that God is pleaſed to give Man, to Direct him in the Courſe of his Life; and if my VVork addeth to the Splendor of that Philoſophical Light, I give the Omnipotent

tent God thanks, who is onely God, and the Diſpoſer of Infinite Matter.

But, Noble Readers, I muſt intreat one Favour from you, which is, to Obſerve the Variety Of and In this Work, for I do not onely Treat of the Infinite Soul, Life, and Body, but I Treat alſo of the Several Actions of that Infinite Body, Life, and Soul; I ſhall not need to tell you, I had neither Learning nor Art to ſet forth theſe Conceptions, for that you will find your ſelf, by reaſon it is not ſo Compendious and Scholaſtical as it might have been, but I can aſſure you, Noble Readers, I was very Studious in my own Thoughts and Contemplations, when I writ it, for all that time my Brain was like an Univerſity, Senate, or Council-Chamber, wherein all my Conceptions, Imaginations, Obſervations, Wit, and Judgment did meet, to Diſpute, Argue, Contrive, and Judge, for Senſe, Reaſon, and Truth, and if you Pleaſe to give your Plauſible Votes, they will have their Reward.

Alſo, I deſire you to Excuſe me, if I have made any Repetitions, for I could not well avoid it, by reaſon, my Book Treats of the moſt Subtil and Obſcure Interior Motions, Degrees, and Temperaments of Matter, as alſo of the Several Creations and Diſſolutions of Several Creatures, in Animals, Vegetables, Minerals, and Elements; all which Variety will cauſe ſome Repetitions, to make my Readers to Remember, as alſo to Underſtand the Truth, at leaſt

leaſt my Conceptions; for of all Studies, Natural Philoſophy, as it is the moſt Difficult to be Expreſſed, ſo it is the moſt Difficult to be Underſtood, eſpecially in Treating of Hidden Cauſes and Effects, but more, when as the Treaty is of the Firſt Cauſe, from whence all Effects are Produced; Wherefore my Repetitions are to be Pardon'd, although they are not ſo Many, but thoſe which are, were made upon Neceſſity, at leaſt did I think them to be ſo.

Beſides, if you find not the Words and Chapters in this Work ſo Properly Placed, as they might have been, I deſire you to Excuſe me, for the Variety of Several Diſcourſes in every Several Chapter did ſo Imploy my Brain, as it had neither Room nor Time for ſuch Inferior Conſiderations, ſo that both Words and Chapters take their Places according as I Writ them, without any Mending or Correcting; The Truth is, my Work goes out into the World like an Unpoliſh'd Stone or Metall, a meer Rough-caſt without any Gloſs or Splendor; but my hope is, it will meet with ſuch Underſtanding Readers, as will not Undervalue the Inward Worth, through a Diſlike to the Outward Form. It is Plain and Vulgarly Expreſs'd, as having not ſo much Learning as to Puzle the Reader with Logiſtical, Metaphyſical, Mathematical, or the like Terms; Wherefore you ſhall onely find therein Plain Senſe and Reaſon, Plainly Declared, without Geometrical Demonſtrations, Figures, Lines, and Letters;

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Nevertheleſs, ſince it concerns Senſe and Reaſon in all Matter, and ſo Conſequently in all Creatures and Actions, Forms and Figures, or what is or can be, it doth not Hinder or Obſtruct Scholaſtical and Artificial Arguments, Rules, Demonſtrations, Names, and Terms, for theſe my Opinions may be Diſcourſed of, as well according to this Manner or Way, as to all other Divers Ways, and in any Language whatſoever. Yet if I were asked, What Way I would have them Declared and Argued, I would Anſwer, After my own Plain Way, that the Truth, or at leaſt the Probability thereof might not be Loſt in the Labyrinth of Sophiſtry, produced from the Corruption of Logick, and the Mixture of ſeveral Languages.

Wherefore, Noble Readers, I pray obſerve, that when I Treat of Natural Creations and Diſſolutions, or Natural Tranſmigrations, Metamorphoſes, and the like, I do not Obſtruct Artificial Transmigrations, Productions, Alterations, Metamorphoſes, Diſſolutions, &c. for Art proceeds from Nature, not Nature from Art, and Logick, Metaphyſick, Mathematick, Chymiſtry, and the like Arts, may have as much Imployment upon the Grounds of theſe my Opinions, as upon any other; for Example, VVhen I Treat of the Natural Metamorphoſing of Looſe Elements, I do not hinder Artificial Imitations of Nature, for there are Natural Contracting Motions, that Congeal VVater into Ice, and there are alſo ſuch Motions cauſed by

by Art which do the ſame: Alſo there may be Colours made by Art as well as by Nature, and many other Examples might be given. Thus you ſee, that my Philoſophy doth not Obſtruct Art, but gives it more Natural Inſight to proceed Artificially; but remember, as I mention'd before, that all Art proceeds from Nature, as alſo that Art can onely Metamorphoſe Looſe and Unſettled Elements, or Looſe and Changable Humors, as I ſhall Declare in the Book, and not thoſe Figures or Creatures that are Compoſed of Many and Different Motions, Parts, and Mixtures.

Another Epiſtle to the Reader.

Noble Readers,

THE Ground of theſe my Philoſophical and Phyſical Opinions was Printed in the Year 1653. to which in the Year 1655. I made an Addition, but after I Returned with my Noble Lord into *England*, I have ſince Reviewed my Former Work, and finding it not ſo Perfect, as I wiſh it had been, I have imployed part of my Idle Time to make it more Intelligible for my Readers. As for the Ground of this Philoſophical work, as Matter, Motion and Figure, 'tis as Old as Eternity it Self, but my Opinions of this Ground are as New as from my Firſt Conception, and the Truth of theſe New Conceptions may be as Old as Eternity, for any thing my Senſe and Reaſon can perceive to the Contrary. But my Deſire is, that I may receive this Favour and Juſtice from my Noble Readers, that, if any hath ſince the Firſt Impreſſion Written, or ſhall Hereafter Write ſuch or the like Opinions as theſe I Divulge in this Work, you would be pleaſed to Conſider, and Remember Mine as the Original, for which Favour and Juſtice I ſhall pray God to Proſper and Bleſs you. Alſo, Noble Readers, I deſire you would be Pleaſed, if you take Delight in Philoſophy, and ſhould chance to Read my Book of Poems,

or

or that Part that treats of Atoms, to Conſider, that though the Opinion of Atoms is as Old as from the Time of *Epicurus*, yet my Conceptions of their Figures, Creating and Diſpoſing, are New, and my Own. And as for Atoms, after I had Reaſoned with my Self, I conceived that it was not probable, that the Univerſe and all the Creatures therein could be Created and Diſpoſed by the Dancing and Wandering and Duſty motion of Atoms, the reaſon, why I think ſo, is as Follows: It is not probable that the Subſtance of Infinite matter is only Infinite, Small, Senſeleſs Fibres, Moving and Compoſing all Creatures by Chance, and that Chance ſhould produce all things in ſuch Order and Method, ſuch Curious Compoſitions, ſuch Subtil Contrivance, ſuch Diſtinctions of Several Kinds, Sorts, Times, Seaſons, ſuch Exact Rules, Fixt Decrees, Perfect Figures, Conſtant Succeſſions, and the like, unleſs every Single Atome were Animated Matter, having Animated Motion, which is Senſe and Reaſon, Life and Knowledge, to Move and Create other Figures, by Joyning and Uniting their Small Bodies by Conſent, and Diſſolving by Conſent, and ſo Ordering by Conſent and Agreement, which is not Probable; for if Every and Each Atome were of a Living Subſtance, and had Equal Power, Life and Knowledge, and Conſequently a Free-will and Liberty, and ſo Each and Every one were as Abſolute as an other, they would hardly Agree in one Government, and as unlikely as Several Kings would Agree in

one Kingdom, or rather as Men, if every one ſhould have an Equal Power, would make a Good Government; and if it ſhould Reſt upon Conſent and Agreement, like Human Governments, there would be as many Alterations and Confuſions of Worlds, as in Human States and Governments by Diſagreement, for there muſt neceſſarily be as much Liberty and Power in every Atome to Diſagree as to Agree. But, as I ſaid, if Infinite Matter were Infinite Atoms, then every Atom muſt be a Living Subſtance, which is a Self-moving Subſtance, otherwiſe they could not Move, but would be an Infinite Immoving Subſtance; and if every Atome had not an Animate Knowledge, there could be neither Order nor Method; and if every one had an Equal Power, as Conſequently every one muſt have, there would be a Diſagreement; all which perſwades me to Wave the Opinion of Atoms. But my Opinion of Atoms, in my Book of Poems, is, if the Infinite and Eternal Matter be Atoms, that thoſe Figures of Atoms, which I there mention, as Round, Square, Long, Triangular, Pointed, and all other Figures, are part of thoſe Figures which make Air, Fire, Water and Earth, and how they are Diſpoſed in the Creation of Animals, Vegetables, and Minerals; alſo that the Weight and Quantity of each Atom muſt be Alike, for if every Atom be as Small as in Nature it can be, then the VVeight and Quantity of each Atom muſt needs be Alike, all which I treat of in my Book of Poems; but by reaſon it is in Verſe, it is not

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ſo Clearly or Solidly Expreſſed, as I might have done it in Proſe ; beſides, it was the Firſt of my VVorks that I Divulged, being Printed in the Year 1653. in which Year alſo I cauſed to be Printed the firſt Edition of my Philoſophical and Phyſical Opinions, but ſince that time I have Thought more of it, and could give Better Reaſons concerning Atoms than I could then, having ſince Spent the moſt part of my Time in Contemplations ; but now I Wave the Old Opinion of Atoms, for it is not probable, they ſhould be the Cauſe of ſuch Effects as are in Nature, and it ſeemeth not ſo Clearly to my Reaſon, as theſe my Own, and Abſolutely New Opinions of Natural Philoſophy, which are like Chymiſtry, that from a Groſs Subſtance can draw an Eſſence as an Extract, which in my Philoſophy is Senſe and Reaſon, that is, Life and Knowledge ; but this Eſſence is no Extract, being Eternal. Alſo, Noble Readers, give me Leave to Inform you, that I have ſome few of my own Philoſophical Opinions in my Book, named *Olio*, Printed in the Year 1655. and ſome in my Book of Natural Deſcriptions or Tales, Printed in the Year 1656.

I confeſs, there have been many Learned and Studious men, which have been accounted the Sages of Former, Preſent, and it may be alſo of Future times ; but in my Opinion, they have had very Improbable, and I may ſay (without Diſ-reſpect to their VViſdome) very Extravagant Opinions and Phantaſms in Natural Philoſophy ; as for Example, ſome have had an Opinion,

Opinion, that the Jogging or rather Jolting of the Earth is the Cauſe of the Ebbing and Flowing of the Sea, I ſuppoſe that Motion muſt be very Uneaſie and Violent, as alſo Equally Conſtant, for if it were not Conſtant, the Tides would not be ſo Conſtant as they are, and if it were not Violent, it could not VVork that Effect; but if the Globe of the Earth hath ſuch a Rough, Jogging, Jolting, Unſettled motion, as thoſe Learned and VViſe men Imagine, there would be as Conſtant Earth-quakes in all the Earthly Globe, as there are Tides, inſomuch, as there would be no Part of or in the Earthly VVorld, a Settled Habitation for thoſe Creatures that Live thereon.

Another Opinion of ſome Learned and Wiſe Men is, that Thunder is cauſed by Frozen Clouds and Roves of Ice falling upon each other, if ſo, moſt of the Creatures upon the Earth would be Knockt on the Head in Times and Places of Thunder, for I cannot perceive, but Clouds and Roves of Ice ſhould fall down upon the Earth more Forcibly than Hail and Snow, for the Natural Air, or other Aſcending Bodies cannot Hinder or Uphold thoſe Solid Clouds of Ice, when they cannot uphold Light Flakes of Snow and Small Hail. Another Opinion of ſome Wiſe and Learned Men is, that all Exterior Motions, or Local Actions or Accidents proceed from one Motion Preſſing upon another, and ſo one thing Driving and Shoving Another to get each other's Place, which, in my Opinion, if ſo, no Creature, eſpecially Animals,

mals, Could or Should Reſt in one Place, but all Creatures in the World would be in a Perpetual Dance, or rather Sliding, which would produce a very Reſtleſs Life, and Weariſom to ſuch Lazy Creatures as I am. Alſo ſome have an Opinion, that, Matter being One and the Same, and that the Heavens and the Earth, or were there Infinite Worlds, are all of the Same Matter, it is impoſſible to be more than One World or Univerſe; which in my Opinion is Nonſenſe, unleſs they make the Infinite Matter One World or Univerſe, for in this Manner we may as well ſay, that by reaſon All Creatures are made of One & the Same Matter, there is but One Creature; as for Example, all Mankind is made of One Matter, wherefore there is but One Man. But in my Opinion, though the Matter be of One and the Same Entity, yet the Creatures are Different, not only made by Motion, but by ſeveral Degrees of that Only matter, and Different motions in thoſe Degrees, ſo that it is the Several and Different Degrees and Motions in Only and Infinite matter, that Make or Create Several and Different Creatures Infinitely and Eternally. But this is to be Obſerved, that the Different Degrees of Matter, and the Different Motions in thoſe Degrees in One and the Same Matter cauſe ſuch Different Effects, as if thoſe Degrees were Different matter. Other Wiſe and Learned men are of an Opinion, that there is no Rational Soul but in Mankind, at leaſt in Animal Kind, and that the Soul of each

Liveth

Liveth and Dwells in a Little Kernel of the Brain, a Small Habitation for ſo Subtil and Dilating an Infuſion, but ſurely the Soul is Wiſer than to Chooſe ſo Cloſe a Priſon to Dwell in, and is more Active than to be Confined; neither can an Exterior motion on that Kernel, Inform the Soul of all the Actions of the Body, or Outward Objects, no more than when one Man Knocks at another Man's Door, the Maſter of the Houſe Knows why the other Knocks. Other Wiſe and Learned men have an Opinion, that the Soul is not any Thing, but yet hath a Beeing, but how Nothing can have a Beeing, I Leave to Rational men to Judge. Other Opinions are, that all Creatures are produced by the way of Eggs as Birds lay. Other Learned and Wiſe men have an Opinion, that Fire is only Motion ~~without Subſtance~~, to which Opinion, when My Lord heard it, he anſwered, that if ſo, then an Houſe when it is Burnt, cannot be ſaid to be Burnt and Conſumed by Fire, but by a ~~Subſtanceleſs~~ *violent* motion. An other Opinion is, that all the Univerſe is made or cauſed by Whirlpools and Circular motions, which is a Giddy and Diſſie Opinion, inſomuch, as it Diſorders all Human ſenſe and reaſon.

Theſe Odd Fantaſtical Opinions, may get Fame ſooner than meet with Truth, for Truth, at leaſt the Probability of Truth, Liveth in Senſe and Reaſon, and not in Irregular Phancies. But there are ſo many of them, that to mention all, I had need to Write another Book, which I will not take the Pains to do. Only this I obſerve,

ſerve, that to Strengthen their Opinions, they are Forced to Steal from each Other, and all the Latter Writers from the Former, only with ſome little Alterations or Additions. Alſo I obſerve, that our Modern Writers in Philoſophy, rather Argue like Scholars than Natural Philoſophers, rather according to the Arts of Men, than to the Works of Nature, Leaving the Prime Cauſes, and Hunting after the Effects, which Effects cannot be throughly Known without the Knowledge of their Cauſe, and though the Cauſe cannot be throughly Known, yet it may by much Contemplation and Obſervation be found out Better than it is, at leaſt ſome Probality thereof.

A

PREFACE,

Concerning the Rules of Art, and Explaning the Nature of Infinite, together with ſome other Terms, for the better Underſtanding of this Philoſophical Work.

THE *Rules of Art cannot be the Rules of Nature, nor the Meaſures of Art the Meaſures of Nature, neither can the Numbers of Art be the Numbers of Nature, for though Art proceeds from Nature, yet Nature doth not proceed from Art, for the Cauſe cannot proceed from the Effect, although the Effect proceeds from the Cauſe, neither can Art the Effect of Nature comprehend Nature, for Nature is ſo far beyond or above Art, as Art is Loſt and Confounded in the Search of Nature, for Nature being Infinite, and Art Finite, they cannot Equalize each other; and this is the Cauſe, that School-men, who are the Maſters of Art, Confound themſelves, and all Profitable Studies with*

Logiſtical Arts, their Artificial Arguments being as Clouds which Obſcure the Natural Light of Information or Obſervation, for there is as much Difference between Logiſtical Arguments, and Natural Obſervations, as between Light and Darkneſs, and the beſt Natural Philoſophers are thoſe, that have the Cleareſt Natural Obſervation, and the Leaſt Artificial Learning; but Scholars are ſo in Love with Art, that they Deſpiſe or at leaſt Neglect Nature, and in that Opinion Rail, or at leaſt find Faults, as are not truly to be Found, with thoſe, that are Truly, Purely, and Rightly Natural Philoſophers; But I Fear, ſaying thus much, will beget my Writings many Enemies, for they will ſay, that I having not the Names and Terms of Art, Speak and Write Non-ſenſe, although the Ground of my Philoſophy is Senſe and Reaſon, Life and Knowledge; But VVorthy Scholars, ſay what you Pleaſe, it will not Trouble my Senſe or Reaſon, Body or Soul.

I have for the better Underſtanding of this my Philoſophical Work, thought fit to Explane ſome VVords uſed therein; and therefore when I ſpeak of Infinite matter, I mean Infinite in Quantity, Bulk, Space, Place, Continuance, as alſo Parts and VVhole, but Individable from each other, alſo all Poſitives, Negatives, and Potentials, inherent in the Only Subſtance. But there may be Objected, as that to School Diſputations, there can be no ſuch thing in Nature, as Infinite quantity, by reaſon all Quantity hath Parts, for Quantity

tity is that, whereby all things become Measurable, for every thing is Measured by its Parts; I answer, that Infinite is neither to be Number'd nor Measur'd, neither to be Added nor Diminished, so that no perfect Division can be made in Infinite matter, as to Divide one part from the rest, for though Parts may be made as Folds, or into Figures, and these to Remove from place to place, and Parts to or from Parts, yet they cannot be Divided from the Whole, as to become each a Single part of it Self, but they remain still Parts, pertaining to the Only matter, for though there may be Infinite parts of Infinite matter, yet not Infinite Single parts, but Infinite Inherent parts; neither can any Part be Measured as a Single part, but as a Part of the Infinite matter, so that not any Part can be absolute or freely Bounded or Limited, but it must have some Reference to the Infinite matter. Also some Scholars will say, there cannot be Several Infinites, because one Infinite would Possess all Place imaginable, and so one Part would not Leave room for the next; but it may be answered, that Infinite matter carries Place with it; also some Scholars will say, that one Infinite cannot be in another Infinite; it may be answer'd, as well as one Creature Lieth in another; as for Example, how many Several Creatures Live in the World? it will be said, they are Part of the World, and so are all Parts Inherent in the Only matter, being but as One: But to Sense and Reason, there is no such thing as Number and Quantity in the Infinite

finite Body or Parts, for Number and Quantity is only Change of Motion and Figures; neither is there such thing as Time in Eternity, but only what Change of Motion makes; nor any such thing as Diversity in Infinite, for Diversity is only Change of Motion and Alteration of Figures; neither is there any such thing as several Kinds or Sorts of Creatures or Substances in Infinite matter, for several Kinds, Sorts and Particulars are but Changing or Forming of Matter into several Figures by Change of Motion; Neither is there Sympathy or Antipathy, but by Change of Motion, for Forming of Matter into Figures, and Changing of Motion in Matter, doth neither Disturb nor Obstruct, nor Alter the Nature of Infinite matter, for the Nature and Entity of Infinite matter cannot be Altered as being Finite, that is, Simple, Uniform, and Intire in it Self; neither can the Body of Infinite matter be Diminished or Increased, being all it Self, but those Figures which Motion makes of the Only matter are the several Parts, and the Motions are the several Actions of Only matter, and Body and Parts are Inseparable, for whatsoever hath a Body, hath Parts, and whatsoever hath Parts hath a Body, and if that Body be Infinite, the Inherent parts must also be Infinite; but mistake me not, for though I say, Body and Parts are inseparable, yet Self-motion can Form and Figure those Infinite parts of the Infinite body, Infinite several Ways, Fashions and Forms, for the Inseparability hinders not the Inherent motion from Figuring

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and Diſſolving of Figures. Alſo there can be no Being without a Body, nor no Body without a Being; Alſo Animate matter and motion are Inſeparable, for the Motion can no more quit the Matter, than the Matter can quit the Motion; Alſo one and the ſame Animate matter may Move in Different Modes or Manners of ways, but not Transfer its Motion; Alſo one and the ſame Motion cannot go out of one Subſtance into another, but the Motion and Subſtance muſt Transfer or Incorporate together; Alſo Animate matter moves in Inanimate matter, but cannot give that matter Animate Motion; Alſo one Moved or Moving Subſtance may Alter the Motions in another Moved or Moving Matter, but not Transfer Motion; Alſo one Body may Impower another Body, ſo as to Hinder it from ſuch or ſuch a manner of Moving, or to Cauſe another Body to Move ſo or ſo, either Exterioufly or Interioufly, and ſeveral Bodies may Strive to Overpower each Bodies Strength, or may Indeavour to Alter each Bodies Figure or Form, but yet it cannot Impart each Bodies Motions without Imparting the Subſtance, wherein the Motion Inheres, that is, that Animate cannot Impart its Inherent Motion without the Matter, but Matter and Motion being Inſeparable, they muſt neceſſarily Continue together, for when as ſeveral Parts of Animate matter, and ſeveral Motions in that matter Intermix, they do not Impart each others Motions into each others Parts, but thoſe Parts and Inherent motions Mix and Work together,

thoſe

those Parts may Help each other, or Oppose each other, or Alter each others Motions, but not Quit their Inherent motions. Another thing is to be observed, that although all Matter is Moving, or Moved, yet all Matter is not Moving or Moved after one and the same Way or Manner, for Motion Alters in the Matter, although it cannot be Annihilated, neither can New motions be made, no more than New matter, for all Sorts of Motions are as Old as the Matter, yet the Matter may Move after Different manners of ways; as for Example, some Parts of the Matter may move sometimes Dilatingly, at other times Contractingly, yet is not the Dilation Annihilated, although the Matter doth not use that Motion, for the Dilating motion is in the Power of the Matter, although not in the present Action, for the Matter cannot Loose any of the Motions that are Inherent to it, but yet the Motions may Alter in the Matter, and sometimes may use Less force, but not Lose force. Also Body and Place are Inseparable, for whatsoever hath a Body hath Place, and there cannot be a Place without a Body. Also Infinite and Eternal are Inseparable, for whatsoever is Infinite is Eternal, and whatsoever is Eternal is Infinite. Also there cannot be Subtraction or Addition from or to Infinite, for Infinite doth not admit of Subtraction or Addition, the Body and Parts being Inseparable; Also Division and Composition are Inseparable, for whatsoever is Composed may be Divided; also Motion, Division and Composition are Inseparable, for not

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any Diviſion or Compoſition can be made without Motion; alſo the Nature of Infinite matter, and the Body of Infinite matter, are Inſeparable; alſo Motion and Infinite is Inſeparable, for whatſoever is Infinite, is either Moving or Moved, or both.

In ſhort: My meaning of Infinite is Philoſophical, not Rhetorical; my Meaning of Parts is, that they are Several Changes, and not Perfect Diviſions; my meaning of Several Infinites is, that they are Several Actions, and not Several Subſtances; my meaning of Only matter is, the Infinite matter in Nature, as it is Matter, that is Conſidered in it Self, called Only matter, to Exclude all other Matter whatſoever. My meaning of Animate matter is, the Pureſt Degree of Infinite matter, called ſo, becauſe it hath Self-motion within it, which is as it were the Life and Soul, that Enliveneth it. Whereas on the contrary, by Inanimate matter, I underſtand, that Groſſer part of Matter, which is Deſtitute of all Motion, and as it were Dead, yet apt to receive Life and Motion from the Animate matter that Works upon it. And ſince the Animate matter is of two Degrees, Senſitive and Rational, I call the Senſitive the Life, and the Rational the Soul, this the Deſigner, and that the Worker, which Senſitive and Rational matter Is and Works in all Kind of Creatures the Same, yet Different ways, according to their Different Shapes, Figures, and Interior nature, ſo that this Senſitive

and Rational matter Is and Works in Animals, in an Animal way, in Vegetables, in a Vegetable way, in Minerals, in a Mineral way, in Elements, in an Elemental way, that is, in a Way, as aforesaid, Proper to their Figure, Shape, and Interior nature; for such and such a Matter or Substance, Moved by such and such Inherent motions, Produces such and such Creatures, Qualities and Effects; and as Animate matter is the Worker and Designer of all Figures, so it is their Maintainer and Dissolver. Also when I mention Cold or Hot motions, or the like, I do not mean Motion without Matter, but such Motions, that Work in such Matter, as to make such Effects. Also my meaning of the Sensitive matter, is not the Particular Sensitive Organs of Animals, but the General Sensitive Substance in Nature, which is the General Life in Nature; and when I say the Unanimate matter, I do not mean that Matter, that is not Subject to Animal senses, but that which hath not Animate motion. By Animate motion, I understand the Intern and Essential motion, properly Inherent in the Nature and Substance of the Animate matter. By Change of Motion, I do not understand Change of Matter, but Change of Motion in one and the same Part of Matter, neither can Motion go out of one Part of Matter into another Part of Matter, without Matter, for Motion cannot Quit the Matter, it is Inherent in; but the Matter can Alter and Change the Inherent motion after

several

ſeveral Ways or Modes, and the ſeveral Inherent motions in ſeveral Parts of Animate matter, may Oppoſe, Obſtruct, or Diſturb each Part and Party, but not Quit or Leave their Parts, they are Inherent in. The word Groſs, when I uſe it, is to be Underſtood two Ways, firſt in Quantity, and then in Quality, as a Groſs Subſtance, and a Groſs Bulk. My meaning of Compoſition and Diviſion is, that they are only Changes of Motion and Figures, and therefore Addition or Diminution cannot be. My meaning of Quantity is, that it is Subſtance and not Meaſure; my meaning of Outward Finites is, the Outward form or bare Figure, not the Subſtance, but the Single Figures of Infinite Subſtance; my meaning of the word World, when I attribute it to Air, Fire, Water and Earth, is, that I underſtand by it an Aggregate of the ſame Subſtance without Mixture of any other. But my meaning is not to Write a Book of Diſputations, as of Infinite and no Infinite, of Matter and no Matter, of Soul and no Soul, of Body and no Body, and of One, Two or Three, &c. as Scholars do in Schools, for One, Two or Three, or all the Numbers in Euclid, *or the Skil of* Archimedes, *can neither Number nor Meaſure Infinite, ſo that their Examples of One, Two or Three will not ſerve, but One, Two or Three Fooliſh Heads with their Sophiſtical Studies make more Noiſe to the Hearing, than they bring Proof to the Underſtanding; the truth is, Sophiſts indeavour to*

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Confound Nature with Art, and to Set Rules and Compasses to Infinite, or otherwise to Scrape and Blot out Infinite with their Ignorance or Nonsense; But I desire my Readers, to keep to my Text, which is Sense and Reason, Life and Knowledge, Matter and Motion, which is Infinite.

PHI-

PHILOSOPHY.

PART I.

CHAP. I.

Of Only Matter.

THere is no First Matter, if Matter is Infinite; nor is there any such thing as the Whole Matter, that is, as a man should say, All of the Matter, for there is no such thing as All in Infinite; and as there is no First Matter, so it seemeth to Human sense and reason, that there is but One kind of Matter, as that the nature and entity of Matter is one and the same as intire in it self; for Several kinds of Matter would make a Confusion; so that the nature or entity is Finite, although the quantity or degrees be Infinite; and that which proves, there is but One kind of Matter, is the union, conformity and order of and in Infinite Matter, as human sense and reason may perceive in the distinct kinds

and ſorts of Creatures, alſo the diſtinct times and ſeaſons, as alſo the orderly Creations and Diſſolutions, and many the like; and if Matter is Infinite, it muſt conſequently be Eternal, for Infinite makes Eternal, and Eternal Infinite.

CHAP. II.

Of the ſeveral Degrees of Only Matter.

AS I ſaid in my firſt Chapter, there is but One kind of Matter, yet there ſeemeth to human ſenſe and reaſon to be ſeveral Degrees in that One kind of Matter; the prime degree in Only matter is, that the Only matter is partly Animate, and partly not Animate; alſo it ſeemeth to human ſenſe and reaſon, that there be two degrees of Animate matter, as the Senſitive animate matter, and the Rational animate matter; alſo to human ſenſe and reaſon there ſeem to be Degrees in that part of Only matter which is Unanimate, as denſe and rare, ſoft and hard, heavy and light, but whether the degrees of Unanimate matter be made by the Motions of Animate matter, or be ſo in their own Nature, I will leave for Wiſe men to judge; but howſoever, theſe ſeveral degrees alter not the nature and entity of Only matter, but if part of Only matter were not Animate, there would be no Motion, and if there were no Unanimate matter, there would be no Groſs Subſtance, and if there were no Degrees in Only matter, there would

would be no Change or Entercourſe in Only matter, or in the Nature of Only matter; But to conclude this Chapter, the Animate part of Only matter is the Life and Soul of Only matter, and the Unanimate part of Only matter is that part of Matter, as is the Body of Only matter; thus there is an infinite Life, Soul and Body, in Infinite Matter.

CHAP. III.

Of the Degrees of that part of Matter as is Animate.

THe Animate part of Only matter ſeemeth to human ſenſe and reaſon to be of two Degrees, as the one degree to be agiler, freer, and purer than the other, which degree is the Radical or Rational part of Only matter; the other part, which is not ſo pure, free, or agil, is the Vital or Senſitive part; this Vital or Senſitive part or degree is the architectonical part of Infinite matter, to fit and form the Unanimate part of Matter into Figures; the other part of Animate matter, which is the Radical or Rational, is ſo pure and free, as it cannot be ſo painfull a Labourer as to work on the groſs Unanimate matter, but moveth in numbers, meaſures, and figures in its own degree of matter; But although every part or degree in Only matter is Infinite, yet the Animate part cannot be ſo

Groſs and Infinite as the Unanimate part of Matter ſurely is.

CHAP. IV.

Of the Intermixing of every degree of Infinite and Only Matter.

AS the Senſitive or Vital Animate part of Only matter liveth in the Unanimate part of Only matter, ſo the Rational or Radical part of Animate matter liveth in the Senſitive part of Animate matter, ſo that all degrees of Only and Infinite matter are Intermixed; for to human ſenſe and reaſon it is not probable, that the Infinite degrees of Infinite matter ſhould ſubſiſt in ſeveral parts; the truth is, it is impoſſible, being all Infinite.

CHAP. V.

Of Motion.

AS there is but One only Matter, ſo there is but One only Motion, which is the Only moving part of Only matter; but as there are ſeveral degrees and ſeveral parts in Only matter, ſo there are ſeveral degrees and ſeveral changes in Only motion; but to conclude this ſhort Chapter, there is not any part or degree in Only and Infinite Matter, but is either moving,

ving, or moved by the mover, which is the Innate Motion in Animate Matter.

CHAP. VI.
Of Vacuum.

TO treat of Vacuum, whether there be any or not, is very Difficult, for there is as much to be ſaid of one ſide as of the other; for if there be no Vacuum, all the matter would be Denſe as Glaſs, and ſo there could be no Agil Motion; but if a Vacuum be allow'd, how can a Place be and no Matter, for nothing is nothing; Wherefore, human ſenſe and reaſon informs, that Matter and Motion doth create Place and Space in it ſelf, as it doth in all Figures, and Diviſions, in the Infinite Body.

CHAP. VII.
Infinite Matter cannot have an Exact figure or form.

THe Infinite and Only matter cannot have an Exact form or figure, by reaſon it is Infinite; but the Infinite matter being divided by ſelf-motion into Creatures or Parts, theſe Creatures or Parts may have exact figures according to their proprieties; yet thoſe Figures or Parts are as Infinite as Infinite matter, of which they were made; neither can thoſe Creatures, Figures or Parts be taken from the Infinite Body; for

for though Parts may be divided, and compoſed Infinite, ſeveral wayes, or manners, or faſhions, in the Infinite Body, yet Infinite can neither be increaſed nor diminiſhed; for though the ſeveral Changes of Motions, which are the ſeveral Actions; and the ſeveral Figures, which are the ſeveral Parts of the Only matter, be all Infinite, yet thoſe Infinites are but as one Infinite, being inherent in the Only Infinite matter, and being not divided from the Only Infinite matter, for the ſeveral Infinites conclude in one Infinite.

Chap. VIII.

Of the Degrees, Changes, Parts, Diviſions and Compoſitions in Infinite Matter.

Although in Nature there is but One kind of matter, yet there are Infinite Degrees, and Infinite Motions, and Infinite Parts in that Only matter; and though Infinite and Eternal matter hath no perfect Figure, yet there being Infinite parts made by Infinite motions in Infinite matter, theſe Parts have perfect Figures; and if there be Infinite degrees, motions, parts, diviſions, compoſitions, and changes, then there are Infinite figures; if Infinite figures, Infinite ſizes; if Infinite ſizes, Infinite ſmallneſs, Infinite bigneſs, Infinite lightneſs, Infinite weightineſs, Infinite rarity, Infinite denſity; and if Infinite degrees of Motion, then there be Infinite de-

grees

grees of Strengths, and if Infinite degrees of Strengths, then Infinite degrees of Power, and if Infinite degrees of Animate Matter, then there are Infinite degrees of Life, and Infinite degrees of Knowledge; but yet in Infinite, there is no ſuch thing as Biggeſt, or Smalleſt, or Lighteſt, or Heavieſt, or Softeſt, or Hardeſt, or Quikeſt, or Sloweſt, or Strongeſt, or Weakeſt, or leaſt Knowing, or moſt Knowing, for there is no ſuch thing as moſt and leaſt in Infinite, nor no ſuch thing as Time in Eternity, yet there is ſuch a thing as Time made by Motion, for Time is only the Variation of Motion. But to conclude this Chapter, all thoſe ſeveral Infinites conclude in One Infinite, like as ſeveral Letters conclude in one Word, ſeveral Words in one Line, ſeveral Lines in one Speech, and theſe ſeveral Letters, ſeveral Words, ſeveral Lines in one Chapter, ſo ſeveral Parts, ſeveral Figures, ſeveral Motions in one Matter, and ſeveral Infinites in one Infinite Body.

CHAP. IX.

Of the Grounds or Principles of Only Matter.

ALthough there is Infinite Matter in Infinite Degrees, Infinite Motions, Infinite Parts, Infinite Diviſions, Infinite Compoſitions, and Infinite Figures and Creatures, yet there ſeem to be but few Principles or Grounds: As for

for Matter, its Ground and Principle is but Quality and Quantity, which Quantity is not to be circumferenced, nor Quality throughly to be known; As for the Infinite Degrees of Matter, there be but two which are Principal, as, Animate and Unanimate, and the Degrees of the Animate are but Senſitive and Rational, and the Degrees of Unanimate Matter is but Denſe, Rare, Light and Heavy; As for Infinite Motions, they may be reduced to ſix Principal ſorts, as, Atraction, Contraction, Retention, Digeſtion, Dilatation, and Expulſion; The Ground of Infinite Diviſions is but Number, the Ground of Infinite Compoſitions is but Symetry, the Ground of Infinite Figure is but Depth, Length, Bredth, Flatneſs, Highneſs, Lowneſs, Roundneſs, Squareneſs, Triangularity, and Paralleliſm; And the differences of Infinite Creatures, are but Animal, Vegetable, Mineral, and Elemental; And as in Nature, ſo in Arts, as all Muſick is from eight Notes, all Language from four and twenty Letters, all Numbers from the Figure of Nine and a Cypher. But, as I ſaid before, that the Quantity and Quality of Infinite matter cannot poſſibly be circumferenc'd, nor throughly known, yet Human ſenſe and reaſon may more probably gueſs or conceive the Prime Cauſes, than the Infinite Effects. But, to conclude, human ſenſe and reaſon perceiveth, that from Few, indeed, but from One Principle, (as the Only matter) Infinite Effects do proceed.

CHAP.

CHAP. X.

Of Varieties.

ALL Variety is made out of the ſeveral Degrees of matter, and ſeveral Changes of motion, which makes ſeveral ſhapes of Figures or Creatures; and yet the ſeveral Degrees, ſeveral Changes, and ſeveral ſhapes or Figures, do make an Equality in Infinite matter, which cauſeth a Sympathy and Order in Productions or Creations, as alſo Flouriſhes and Decays, as, Infancy, Youth, Age, Life, Death, Times, Seaſons; as alſo the diſtinct Kinds and Sorts of Creatures, as alſo Qualities and Proprieties of all kinds and ſorts of Creatures.

CHAP. XI.

Of the Equality of ſeveral Degrees and Changes of Infinite Matter and Motion.

THE Only matter being Infinite, the ſeveral Degrees of matter, and ſeveral Changes of motions muſt alſo be Infinite; for the Infinite of the Severals is the Infinite of the Whole; I ſay, Whole, for diſtinctions ſake; yet there is an Union and Equality in the Infinite of each Degree of matter, and Change of motion: For as there is Infinite Unanimate matter, ſo there is Infinite Animate matter to make an Equality; and as

there are infinite Denſities, ſo there are infinite Rarities; and as there are infinite Lightneſſes, there are infinite Weightineſſes, to make an infinite Equality, in infinite Nature. As for the Changes of Motion, as there are infinite Attractions, ſo infinite Dilatations; and as there are infinite Retentions, ſo infinite Digeſtions; and as there are infinite Contractions, ſo infinite Expulſions to make an Equality in infinite Matter; and as there are infinite Diviſions made by infinite Motion in infinite Matter, ſo there are infinite Compoſitions made by infinite Motion in infinite Matter to make an Equality; and as there are infinite Creations, ſo there are infinite Diſſolutions; and as there are infinite Figures, ſo there is infinite Matter; and as there is infinite Life, ſo infinite Knowledge, all which makes an infinite Equality in infinite Matter, which is infinite Nature.

CHAP. XII.

Motion cauſeth Diſturbance, but the Nature of Only Matter keepeth Peace.

MOtion, the Creator of Figures, doth make Warr, and oftentimes oppoſeth it ſelf in ſeveral Figures or Creatures, which Self-motion Creates; for though the Infinite and Eternal matter is Eternally in Peace, not being ſubject to Change, yet Motion and Figure being ſubject to Change, ſtrives for Superiority, which

which Superiority cannot be in Infinite, which cauſeth an Eternal Warr, or at leaſt Diſputes; but Motion, the Active part of Infinite matter, would cauſe Confuſion, being in its nature reſtleſs; but the Only matter, being Intire in its own nature, alſo Infinite and Eternal, is the cauſe that Confuſions cannot be; for though the ſeveral changes of Motion, and different Shapes or Figures of ſeveral Creatures, ſtrive to make Diſturbance and Diſcord, yet the Matter being One in it ſelf, makes Peace and Concord in Infinite, and Infinite in the Matter: in truth, the Unity of the nature of Only and Infinite matter, maketh Concord out of Diſcord, ſo as the Cauſe ordereth the Effects, for the Effects cannot alter the Cauſes, for though the Effects make Diſturbance, the Cauſes make Peace.

CHAP. XIII.

Of the Knowledge and Power of Infinite Matter.

THe Infinite and Only matter cannot poſſibly Know it Self, becauſe it is Infinite, and therefore cannot have a Finite Knowledge, either in the Cauſes or Effects; and as Infinite matter cannot poſſibly have a Finite Knowledge, ſo it cannot poſſibly have an Abſolute Power, having an Infinite Power, for the Infiniteneſs hinders the Abſoluteneſs; neither hath Infinite matter a

Free will, for not any Change or Alteration can be made in Infinite and Eternal matter, for what was, is, and ſhall be; but could there be any Alteration in Infinite matter, there might be a Confuſion, but by reaſon there cannot be an Alteration in Infinite and Eternal, there cannot poſſibly be a Confuſion.

CHAP. XIV.

There is not a Judge in Infinite Matter.

THere can be no Complaints preſented to Infinite, no Intreaties or Petitions can perſwade Infinite matter, or Bribe or Corrupt it; there can be no Appeals heard, or Cauſes determined; for Infinite cannot Judge, nor be Judged, nor be Preſcribed, Setled, Ruled, or be Diſpoſed of; neither can Infinite have an Abſolute Power, for Abſolute is Finite; neither can there be Perfection in Infinite, for Perfection hath a Circumference; for though there is an Union in the nature of Infinite matter, yet there cannot be an Union in the Infiniteneſs.

CHAP. XV.

Of Life, Knowledge, and Matter.

WHatſoever hath Animate Matter and Motion, hath Life and Knowledge, and if all the Inanimate matter is mixed with the

the Animate matter, then the Only and Infinite matter is Living and Knowing; but according to ſeveral Animate motions, there are ſeveral Lives, and ſeveral Knowledges, for Life and Knowledge liveth in Animate matter and motion, for Motion liveth in Matter; for though the Nature or Entity of Infinite matter never altereth, yet the manner of Motions altereth, and changeth in that matter; and as Motion altereth and changeth, ſo Life and Knowledge differeth, as alſo Figures or Shapes of ſeveral Creatures; for as there are different Motions in different Creations, ſo different Motions in different Creatures; for Matter, Life, and Knowledge, is divided into Figures by the Animate matters Motions; for though there is a general mixture of Animate and Inanimate matter, yet there is neither a general Life, nor a general Knowledge, which I ſhall treat more fully of.

CHAP. XVI.

Of Life and Knowledge.

LIfe is that part or degree of Animate matter, which I name the Senſitive, and Knowledge is that part or degree of Animate matter, which I name the Rational; The Senſitive part of Animate matter worketh only on the Inanimate part of matter, Creating Infinite Figures or Creatures of the Infinite Inanimate part of matter;

ter ; This Senſitive Creating matter is a Rare, Acute matter , which Rarity and Acuteneſs cauſeth it to have a Subtil, Agil, Peircing, Dividing propriety or faculty , by which Power it worketh and formeth the Inanimate part or degree into particular Figures or Creatures of different kinds or ſorts, according to the ſeveral degrees of the Inanimate matter ; As for that part or degree of Animate matter, which I name the Rational Animate matter , 'tis a degree Purer and ſo Agiler than the Senſitive Animate matter, it is the Infinite Mind or Soul of Infinite matter , as the Senſitive is the Infinite Life of Infinite matter ; but this Rational matter or ſubſtance is ſo pure and fine , as it cannot work on the Inanimate part of matter, being too Groſs a Subſtance , but only moveth in Figures and Motions of its Own Subſtance in the Senſitive part of matter, which Senſitive part or degree moveth in the Inanimate part or degree of Infinite matter , ſo as the Inanimate, and the Senſitive, and Rational parts or degrees are a prime triumvirate of the prime degrees of the Only and Infinite matter, living, mixing, and moving together, as the Body, Life, and Soul.

CHAP.

CHAP. XVII.

Of the Senſitive and Rational Animate Matter.

WHatſoever hath Motion, hath Animate Matter, and what thing or part of the World is there that we are capable to know, that is not Moving or Moved? ſo that all Matter is Moving, or Moved by the mover, which is the Animate part of Only and Infinite matter; if ſo, all things have Senſe, by reaſon all things have Animate matter, and if all things or Creatures have Senſitive Animate matter, why not Rational Animate matter? for there is Infinite of every ſeveral ſort of Only matter, as being no Limit of Infinite; if ſo, why may not Vegetables, Minerals, and Elements, have as much Animate matter, both Senſitive and Rational, as Animals? which is, to have a Senſitive Life, and Rational Knowledge, only they want the Animal ſhape or Figure, and ſuch ſorts of Motions as are proper to the Animal Creature, to expreſs their Senſe and Knowledge in an Animal way; for had Vegetables, Minerals, and Elements, the ſame Shape created by the Creator, which is the Animate matter and motion, there might be Vegetable, Mineral, and Elemental Men, Beaſts, Fouls, and Fiſh, as alſo there might be Animal Vegetables, Minerals, and Elements. Wherefore, I cannot perceive

perceive in ſenſe and reaſon, but there may be as many Several and Various Motions, and as much Vital or Senſitive Life, and as much Rational Knowledge in Vegetables, Minerals, and Elements, as in Animals, being all Created by Animate matter and motion, which is a Self-moving matter, only they want the Animal ſhape and motions to expreſs the Animal way; but if their Senſe and Knowledge be not the ſame Knowledge and Senſe as in Animals, but different Senſe and Knowledge, by reaſon of their different Shapes or Figures, yet it is Senſe and Knowledge; for ſhall we ſay, or can we think, that a man doth not know, becauſe he knoweth not what an other man knoweth? ſhall we ſay, not any Creature but Animals, have Senſe and Knowledge, becauſe we know not what other Creatures know? but to draw towards an end of this Chapter, human ſenſe and reaſon doth inform us, that all Creatures are Created by Animate matter, and Indued with Animate matter, which is Life and Knowledge, but yet it is not poſſible for Vegetables, Minerals, or Elements, to have either the ſame Life or Knowledge as Animals, or Animals to have the ſame Life or Knowledge as Vegetables, Minerals, or Elements, becauſe the motions and degrees of Temperaments, as alſo their Creations, Conſiſtence, their Proprieties and Faculties are different, otherwiſe Infinite matter would be as one Figure, and no Variety, or elſe would be in a Confuſion, without Diſtinction.

CHAP.

CHAP. XVIII.

Of Creations.

THat Animate Part or Degree of matter, which is Life, is the Creator of all Figures or Creatures, which are Created of Inanimate matter; 'tis alſo a Diſſolver of Figures or Creatures: for this Self-moving matter is never at reſt, for Reſt is againſt the nature of Animate and Self-moving matter, that is the reaſon that when a Creature is made, it is Diſſolved again, and formed into a New Figure, only ſome are ſooner Created, and ſooner Diſſolved again than others, according to the Agility of the Animate matter, or according to the Temper or Degrees of Inanimate matter, or according to the Shapes or Proportions or Creations of Figures; As for the Ground or Principal Motions, as I have formerly declared, they are ſix, as Attraction, Contraction, Retention, Digeſtion, Dilatation, and Expulſion; Attraction draweth Parts, Contraction knitteth Parts, Retention fixeth Parts, Digeſtion fitteth and diſpoſeth Parts properly, Dilatation inlargeth Parts, Expulſion diſperſeth Parts; but though there are but ſix Ground or Principal motions, yet there are Infinite Changes, and Several Motions produced from theſe ſix; the like for Rules, Numbers, Meaſures, and Figures, as from the Ground and Principal, Infinite are produced, as from one kind of Mat-

ter Infinite Degrees, from one Motion Infinite Changes, from Matter and Motion Infinite Figures or Creatures ; but the Senſitive Animate part of matter worketh or createth according to the Temper or Degrees of the Inanimate matter, for in Spongy, Porous, and Light degrees of Inanimate matter, the Senſitive Animate matter Createth and Diſſolveth ſooner or faſter thoſe Figures or Creatures made therewith, than in that Inanimate degree of matter, which is Denſe, or Heavy, or Hard ; This is the reaſon that Minerals are a longer time ere they be finiſhed or diſſolved than Vegetables, Animals, or Elements, becauſe in reaſon that Degree of matter that is in Minerals, is more Denſe and Hard, than that which is in Vegetabes, Animals, or Elements ; for it is probable, that the Senſitive Animate matter worketh in Change of motions, according to the Temper or Degree of the matter it worketh or moveth on and in, for ſeveral Degrees of Inanimate matter, require ſeveral Changes of motions ; but I deſire my Readers not to miſtake me, when I ſay ſome Creatures are longer or ſooner Created or Diſſolved, according to the Temper or Degree of Inanimate matter, for I mean longer or ſooner according to the Nature of each Degree, and not to the outward Form or figure, for Metal may ſoon be melted, but not ſo ſoon changed in its Nature from being Metal, and ſo the like of all Creatures in nature ; But to explain my ſenſe and reaſon to my Readers, as plainly as I can, I will

will assimilate the divers Changes of Sensitive motions in the Inanimate matter to several Work-men, being alwayes busily imployed, as in Removing, Lifting, Carrying, Driving, Drawing, Placing, Digging, Cutting, Carving, Forming, Fixing, Measuring, and millions the like, working and moving according to the Temper or Degree of Inanimate matter; as some Sorts of motions, and some Degrees of matter make the Roots, others the Pith, others the Bark, others the Leaves, others the Fruits, and so the like in all manner of Vegetables; as also some Sorts or Degrees of matter and motions proper thereto make Sinews, some Bones, some Marrow, some Flesh, some Veins, some Blood, some Brain, some Humours, some Senses, some Appetites, and the like, of whatsoever belongeth to Animals; and some Sorts or Degrees of matter and motion make, some Tin, some Lead, some Silver, and some Gold, some Marble, some Diamonds, some Pibble-stones, and so whatsoever belongeth to Minerals; also some Sorts and Degrees of matter and motions make, some Earth, some Water, some Air, some Vapour, some Fire, or whatsoever belongeth to the Elements; but there are so many Several sorts of Creatures in every Different kind, as I am not able to express the particular Degrees, and several Changes of matter and motion in every Particular Creature, and every Particular part in every Particular Creature.

CHAP. XIX.

Of Productions.

THe prime Ground or Principle in Creation is Production, and the reaſon that all Creatures or Figures are made by Production, is, that the Only matter is Infinite, and being Infinite, all Degrees and Motions in the Only matter are alſo Infinite, which cauſeth a neceſſity for one Creature to be produced from another, ſo that the Diſſolving of one or more Creatures or Figures is the way of the Creation of one or more Creatures or Figures, and muſt of neceſſity be ſo, for there is no New matter in Infinite, nor no New nature in the Only and Infinite matter, for change of Motion, and change of Figures, is in one and the ſame Matter, and in one and the ſame nature of the Only matter, ſo that the Degrees, Motions, and Figures, being but Parts of the Only and Infinite matter, cannot be Divided or be taken from the Only and Infinite matter, being produced by and in the Only and Infinite matter, which Only and Infinite matter is as Old as Eternity, which hath neither Beginning nor Ending.

CHAP. XX.

Of the Producer, and the Produced.

AS I ſaid in my former Chapter, that all Creatures or Figures are Created by the way of Production, yet ſome Creatures or Figures are produced by more or fewer Producers, nor all Creatures are not produced after one and the ſame way of Production, but ſome one way, and ſome other wayes, yet every Produced partaketh of, or from their Producers, otherwiſe there could be no Produced; and not only of the Producers Producing Motions, but Producing Subſtance, according to the propriety of the Kind or Sort of Creature; for it is not as ſome imagine to be, as only by ſuch Motions made between the Producer, that Createth the Produced, but it is part of the Subſtance of ſuch Degrees or Tempers of matter that Incorporateth, that cauſeth the Forming or Creating of the Produced; but ſome Producers contribute only to the firſt Foundation of the Creature, and other Producers to the Nouriſhment, others to the Conſiſtence and Perfection, and others to the Uſe of the Produced, but the prime Producing Creator of the Produced Creature, is the firſt Beginner and Founder.

CHAP.

CHAP. XXI.

That the Produced partakes of the Producer.

ALL Produced Creatures partake of their prime Producers, of each part more or leſs, not only in Effect, but of Subſtance; and the proof of this is, that ſuch a Creature or Creatures could not be Created but by the ſame Creators, otherwiſe the ſame Motions made by ſuch Kind, Sort, or Degree of matter, would produce the ſame Creature, but that cannot be, for the ſame Kind of matter, both Inanimate and Animate, hath the ſame Degrees and Changes of Motion in general, but not in every particular Part, or particular Figure, but every particular Part is as it were by and of it Self, for what is one Part, is not an other Part; as for Example, there are two Rare Parts, and though they be both Rare, yet they are two Parts; ſo there be two Contracting Motions, and although they be both Contracting Motions, yet they are two Contracting Motions; for as ſeveral Motions make ſeveral Figures, and ſo ſeveral Parts, ſo ſeveral Parts make ſeveral Motions; thus there is Diviſion in one and the ſame Kind, and one and the ſame Propriety, or Quality, or Nature; but as I ſaid, the Produced partakes of the Producer, for particulars Produced could not be Produced but by ſuch particular Producers.

CHAP. XXII.

Of the ſeveral Creating Motions and Matter.

THe ſame Matter or Figure of Producers doth not alwayes move after one and the ſame manner in Producing, for then the ſame Producers would produce one and the ſame Creature by repetition, and then there would be no Difference of Figures or Creatures, but all that was Produced from ſuch Producers would be all alike as one; but the Various Changes of Motion, in one and the ſame matter, cauſe a Difference in the Produced, as in Semblance, Conſtitution, Humours, Diſpoſitions, Qualities, Faculties, Proprieties, and the like; for though the Producers be the Same, and not only the Produced of the ſame Kind or Sort, but of the ſame Nature, as coming from ſuch Producers, yet the Produced are not alwayes alike, but ſome Vary more than others; 'tis true, ſome are ſo alike, as not to diſtinguiſh them, but that is ſo ſeldome, as it is a wonder, yet they are two ſeveral Creatures.

CHAP. XXIII.

The Senſitive Animate Matter cauſeth the Inanimate Matter to help in Creations.

THe Animate part of Matter doth not only move and work in the Inanimate part of Matter, in Creating of Figures of that part, but cauſeth that part as the Inanimate part to help in the Creation ; for though the Inanimate part of Matter is not moving, yet it is moved by the Animate part, but it moveth as the Inſtrument, not as the Worker, and is as the Art, not as the Nature, for the Animate matter worketh by and in its Own Power, but the Inanimate matter worketh by the Power of the Animate; and there are different Creations, for all Arts are Creations, as Building, Carving, Painting, Framing, Forming, and whatſoever is made by Men, or any other Creature, is Creation, or whatſoever they Undoe or Unmake is Diſſolution, but all Arts are made by the Animate Matter and Motion, although not the ſame manner or way as that we name Natural Creation or Production, yet that way as we name an Artificial Creation; but Creations are ſo Various in Infinite Figures or Creatures, as even in one and the ſame kind, as in Animal kind, Creations or Productions are not after one and the ſame manner of way, for Beaſts are Created or Produced after one manner of way, Fowls or Birds after

after an other manner of way, Fiſh after an other manner of way, Flies and Worms and crawling Creatures after many different manners and wayes; ſo for Vegetables, as ſome by the way of Sowing of Seeds, and ſome by the way of Planting of Slips, and ſome by the way of Grafting or Inoculating; as for the Creating of Minerals, the wayes or manner of wayes are not ſo perfectly found out by Human ſenſe or reaſon, for though Human ſenſe and reaſon may probably gueſs or imagine the way, yet not perfectly know or underſtand, although Chymiſts have ſtudied and practiſed to underſtand the way or means, but as yet cannot find it out.

CHAP. XXIV.

Of the Motion of Animate Matter.

IT is not Motion which is the cauſe of Animate Matter, but Animate Matter is the cauſe of Motion, for were there no ſuch Matter, there would not be any Motion, for Motion is but the Effect, not the Cauſe, either of Senſitive or Rational Animate Matter; as for the Senſitive Animate matter, as I have ſaid, it moveth and worketh only upon the Inanimate part of matter, but the Rational Animate matter moveth only in it Self, in Number and in Meaſure, but neither the Senſitive Animate matter, nor Rational Animate matter, moveth alwayes Regularly,

gularly, but many times Irregularly, which cauſeth Miſhapen Figures or Creatures, as Deformed and Monſtrous Creatures, and Diſtempered and Extravagant Senſes, and Diſtempered and Diſtracted Minds, of which I ſhall diſcourſe more towards the latter End of my Book.

PRE-

PREFACE

To the Second Part.

IN the First Part of my Book, I have treated of the Only and Infinite Matter, the Nature, Degrees, Motions, and Figures, and of Creation or Production in general; but to treat of every Several kind and ſort, and of every Particular Creature in Infinite Matter, would be not only an endleſs Work, but it is impoſſible to be done; Wherefore, I ſhall chooſe ſome Particular Figures to diſcourſe of, and firſt of that Animal, named Man. In truth, this Creature Man thinks and believes it ſelf to be the ſupreme Creature of all Creatures in Infinite Matter; In truth, it believes it ſelf to be above Infinite Matter: but what is above Infinite Matter is above a Finite Opinion, neither belongs it to Natural Philoſophy, for Natural Philoſophers go and ſtudy not beyond Senſe and Reaſon; and according to the proportion of that Senſe and Reaſon that I have, I ſhall declare my Philoſophical Opinions.

PHILOSOPHY.

PART II.

CHAP. I.

Of Creation, or Production.

According to my former Deſcription of Animate and Inanimate matter, I ſhall deſcribe the Creation of that Animal named Man; for though I cannot poſſibly deſcribe every particular Motion in every particular Creature, by reaſon Motions neither move nor work juſt alike in every particular Creature, nor in every particular Part in every particular Creature; for if Motions did not Variate in each Creature, and every Part in every Creature, every Creature and Parts of Creatures would be juſt alike; for though there is a Likeneſs in every ſeveral Kind, and every ſeveral Sort of Creatures, yet not ſo, but that every particular Creature of the ſame Kind or Sort is Diſtinguiſhable; but Animate

mate Motion, the Creator or Producer of particular Creatures, works according to the propriety of Inanimate matter, although Motion doth Temper, Mix, Joyn, Compoſe, Divide, and Diſſolve Infinite Matter into Infinite Parts and Figures; for though Infinite matter is Individable in its Nature, yet not in its Subſtance; for though the Nature of Infinite matter cannot be divided from it ſelf, yet the Subſtance may be divided in it ſelf by Self-motion into Atoms. But now I am to treat of that Creature, I will not ſay Atom, although in compariſon of Infinite matter Man is but as an Atom; but there are numbers of Various motions that joyn in the Creation or Production of an Animal Creature, eſpecially a Man, for there are innumerous Various motions that joyn in or to the Creation or Production of every particular Part, though never ſo ſmall in the whole Figure, not only in and to the Production or Creation, but in and to the Conſiſtence and Perfection of every Part, as much as to the Whole; Wherefore, the Animal Figure, eſpecially Man, who is framed of many different Parts, cannot be formed Perfectly, as to have a perfect ſhape of the whole Figure, as in Nature it ſhould have, in one Inſtant of time, as ſome Learned Phyſicians have written, I will not ſay, believed, that Man's ſhape is formed intire at the firſt Production, but that ſeems to my Reaſon to be impoſſible; for the Varieties of motions in ſeveral Mixtures and Temperaments in different Parts proper to a

mans

mans Body, muſt hinder that ſudden Perfection of the Whole Body; in truth, it is againſt all Senſe and Reaſon, to believe or imagine, that an Animal is formed in a Perfect ſhape at one Inſtant, were it no bigger than a Hair of the Head, unleſs they think or imagine, an Animal figure is Created as eaſily as Water is metamorphoſed into Snow, Hail, or Ice; but thoſe Figures or Creatures that have Variety of Parts, muſt needs have many Changes of Motions, and divers Temperaments of Matter, which will cauſe Degrees in Creation or Production, which Creating or Producing degrees we name Time; but according to the nature, form or ſhape of the Figure or Creature, is the Creation or Production longer or ſooner ere the whole Figure is produced or made; That is the reaſon that ſome Creatures are produced, formed, and perfected in a moneth, whereas others are almoſt a year ere they are perfected; the truth is, that the Senſitive matter and motion, as alſo the Inanimate matter, is not readily and properly fitted to Create or Produce a Figure or Creature compoſed of ſeveral and different parts on a ſudden, but by degrees of Time and Seaſon, like as an Houſe that is a building, the Materials are brought from Several places, and not only ſo, but thoſe materials muſt be Cut, Carved, Fitted, Placed orderly and properly; ſo for the Animal Houſe muſt Materials be brought, as Food, and that Food ordered properly for Nouriſhment, which is the natural Building, as alſo

alſo Repairing; but as there be Degrees of time, in Creating or Producing a Figure, ſo there are Degrees of Increaſing, Inlarging, and Strengthening every particular Part of a Figure; but to conclude this Chapter, the firſt Producer is the firſt Founder.

CHAP. II.

Of the Quantity of Animate Matter, and Inanimate Matter, in Creations of Men or Animal Kind.

THe reaſon that the Senſitive Animate matter, when it begins to Create an Animal by the way of Producing, and that the Producer feeleth not, or is not ſenſible of the Produced, is, that untill ſuch time as the Mould, Print, or Figure of the Produced be fully finiſhed in the Womb, it cannot have the Motion proper to his whole Figure, which is, that the Produced cannot have an Animal Motion untill it be perfectly made an Animal Figure or Creature, and after the frame is Built, and the ſhape Perfected, then the Produced is Furniſhed with Strength, and Inlarged with Growth by nouriſhing Supplies of Senſitive matter; but in all Creations, there is Rational with Senſitive and Inanimate matter, for though the Rational Animate matter moves not the ſame way or after the ſame manner in the other Degrees of matter before the frame of Animal Figure or Creature

ture is Perfected, yet that Matter is there, and ſurely hath a part in the Creation, although not in the Building or Labouring, yet in the Ordering, Contrivance, and Deſigning like as Surveyers; but as all Animal Creatures require Time in their Creation, ſo in their Perfection, which Perfection is to have a perfect Shape, Strength, and Knowledge proper to the Nature or Kind of its Figure, by which we may perceive, it is not only the Motion, but the Quantity of Matter, that brings a Creature to Perfection, that is, a juſt Proportion of matter proper to the Nature or Size of the Figure; for if Perfection were at the firſt Inſtant, and not by Degrees, a Child in the Womb, or at leaſt new Born, would be as Big, Strong, Senſible and Knowing as at Ripe Age; but we may obſerve, that it is not ſo amongſt the Creatures in this World, eſpecially that Creature named Man, for his Growth, Strength, and Knowledge is Increaſed by Degrees, for after the Parts and Paſſages are made, every Degree of matter proper for that Creature is brought to, and carried in by the Matter that is in the Producer, and after it is ſeparated from the Nouriſhment of the Breeder, it is Perfected by other matter proper for it, from other Creatures, that do contribute to its Perfection; and as other Creatures do contribute to the Perfection of that Creature, ſo that Creature doth contribute to the Perfection of other Creatures, and muſt do ſo upon neceſſity, ſince all Matter lies or lives in Figures and

Creatures

Creatures, as all Figures and Creatures lie or live in Matter; but as Children get Strength by Food, ſo they get Knowledge by Experience, although there may be a Strong-bodied man a Fool or Mad, and a Weak-bodied man Wiſe and Sober, which is cauſed by the Regularity and Irregularity, as alſo by the Variety, and Swift or free Motions, or the Slowneſs, or few Changes of the Rational and Senſitive matter and motions; but as all Senſes are not fixed or bound to one Organ in a Body, ſo all Knowledge is not bound or tied to one Senſe, no more than all Matter is bound or tied to one Creature; but as the Senſitive Animate matter makes Appetites, ſo the Rational Animate matter gives directions in the choice of the Food of Appetites, as what is good, or what is bad for the Creature, but many times the Motions of Senſe and Appetite are too ſtrong for the Motions of Reaſon and Wiſdome.

CHAP. III.

Of Infancy, Youth, and full Growth.

THe reaſon that moſt Animals, eſpecially Men, are Weak whilſt they are very Young, and that Strength increaſeth by degrees, is, that they have Little Subſtance, for both Animate and Inanimate matter increaſeth together, and the way of Increaſing is by Nouriſhment, which is received through the ſeveral Senſitive Paſſages,

through which Paſſages the Animate matter and motions bring in, and carry forth uſefull and unuſeful matter; as for the Senſitive motions, Attractive motions gather and draw Subſtance proper to the Figure, and for the Figure, Contraction bounds and ties all Parts firm to each other, Retention fixes thoſe Parts that are apt to looſe or wander out of their proper places, Digeſtion ſorts and fits ſeveral Subſtances to ſeveral Places proper to every ſeveral Part, Dilatation inlarges every ſeveral Part, ſpreading each ſeveral ſort of Subſtance towards a Circumference proper to the nature of the Figure, Expulſive motion carries out all Unuſefull, Unprofitable, and Hurtfull matter or ſubſtance, which is brought into the Figure, or made in the Figure; but it is to be underſtood, that theſe ſix prime Motions produce Infinite Changes, as eight Notes in Muſick do, or the number of Nine doth Infinite Numbers, and when there is a Harmony in Motion, the Body is Strong, but a Diſcord in Motion makes the Body Weak, and many times there is more Unuſefull matter brought in than Uſefull, and then the Body thrives not, that is, it doth not Increaſe towards Perfection; alſo the finiſhing of the Body is hinder'd by the Irregularity of motion, for the Senſitive Animate matter doth not alwayes and at all times move Regularly, but often times Irregularly, in Miſtempering, Miſplacing, Croſs moving, and the like, which cauſeth Deformities, Weakneſs, and Unnatural or Untimely Decays; but where-

as

as the Senſitive motions are Regular, and work or move Harmoniouſly, then the Body is Perfect, Strong, Healthfull, and if the ſeveral Mixtures and Temperaments be Pure and Fine, the Body is Beautifull, but if the Mixtures and Temperaments are Groſs, then the Body is Foul; As for Youth it is, whereas there is a Greater proportion of matter gathered together by the Senſitive motions, Increaſing the Bodies Strength, by Increaſing the Bodies Quantity, which Increaſe is, as I have ſaid, brought into the Body through the Senſitive paſſages or doors, of which I ſhall more fully diſcourſe afterwards; but if the more Quantity of the proper Subſtance, and if the Motions be Regular, the Body is Larger and Stronger, this is the reaſon that Youth is ſtronger and larger than Infancy; and at full Growth or Perfection than in Youth; by this we may perceive, there requires Time and Seaſon, which is the Variation of Motions, and proper and fit Matter or Subſtance to Produce, Increaſe, and bring an Animal Figure or Creature to Perfection or full Growth; but do not miſtake me, when I ſay full Growth and Large, as if not any Animal were Perfect that were not Tall and Big, no, I mean Large, as from the firſt Degree to the laſt Degree of their full Growth, for there are different Degrees of Sizes amongſt one and the ſame kind, as Mankind, for a Little man is as Perfect at full Growth as a Great man, a Pygmy as Perfect as a Giant, a Worm as Perfect as an Elephant, a

Flie as Perfect as an Oſtridge; and as for Strength of Body, and Underſtanding, it is according as the Body is Firmed, Setled, and Inabled by Contraction, Retention, and Digeſtion; and for the Underſtanding, 'tis according as the Rational Matter moves, and according as the Organs, Paſſages or Parts of the Body are perfectly made; this is the reaſon that ſome Little men may be Stronger than men of a Greater ſize, as alſo a Little man may have more Wit, Knowledge or Underſtanding than a Greater man, for neither ſtrength of Body nor Mind lie in the Bulk of Inanimate matter, but in the Regularity and Strength of Senſitive and Rational Motions.

CHAP. IV.

Of Decay, or Age.

WHen as the Senſitive Animate matter and motions have Produced or Created a Figure or Creature, and brought it to Perfection, that is, full Growth, if that Matter and Motion did not Diſſolve that Creature again, that Matter and Motion would want Imployment, having no work to do, and Idleneſs, which is Reſt, is againſt the nature of Self-moving matter, for Self-moving matter is a Perpetual Motion; this is a reaſon, that as ſoon as the Body is brought to Perfection, that is, to be fully finiſhed and furniſhed, the Animate matter moves

moves to Diſſolution, undoing or unmaking what they had made or done, which is the cauſe of Decays and Infirmities in Age; but ſometimes the Retentive motions predominate moſt or longer than other Motions, which cauſes a longer continuance of Health and Strength in ſome Men than in others, and ſometimes the Diſſolving motions are quicker in ſome Bodies than in other Bodies, which cauſeth ſooner Decays and Infirmities; but according to the Senſitive motions in Sickneſs or Health, as alſo Life or Death.

CHAP. V.

Of Death.

AS Life is Creating Motions, ſo Death is Diſſolving Motions, and when there is a general alteration of ſuch Motions, as are proper to to the Conſiſtence of the Creature, it is named Dead, but when the Figure is Diſſolved, and that the Senſitive matter and motions diſperſe, & that Diſſolved figures materials go to the Making or Producing other Figures of divers natures, it is named Death, or Tranſmigration; but this is to be obſerved amongſt Animals, that an Animal is longer a Creating or Making than in Diſſolving; the reaſon is, that there be required different Compoſing and Agreeing motions, and ſeveral Sympathetical Degrees, Mixtures, and Temperaments of Matter or Subſtance

ſtance in Creating or Making, whereas Diſſolving is only to diſperſe thoſe Subſtances or Parts.

CHAP. VI.

Of Local Motions and Shapes, as alſo of ſeveral Shapes amongſt Animals.

NOw I have diſcourſed of the Production or Creation, and the Perfection of the Body of that Animal Creature, named Man, give me leave to diſcourſe of the particular Shape of the Body, which doth ſomewhat reſemble other Animals. Firſt, I will diſcourſe of the Local Motions and Shape; as for Local Motion, it is inherent in all Animate matter, as a Self-moving matter, ſo that Local Motion is to remove from place to place by Self-motion, and Local Shapes are Animal Shapes, as not being bound, joyned, or tied to any other kind of Creature, either for Support or Nouriſhment, as Vegetables are, but is free, and looſe of it ſelf, and by it ſelf, from all others, and to all others; The Differences of Shapes amongſt all Animals, 'tis a greater labour to diſcourſe of, than I am able to perform; but this is to be obſerved, that ſome Shapes have power over other Shapes, but it is not occaſioned by the Size or Bulk or outward Strength of the Shapes, but occaſioned by the Manner or Form of their Shapes, that either cauſes Advantage or Diſadvantage; for a little Mouſe

Mouſe will run up and through the Trunk or Snout of a great Elephant, and eat out his Brain and Kill him; a little Aſp will ſting a Man to Death, and a little Flie a Horſe to Death; a little Worm will eat through the Vital parts of a large and ſtrong Creature; Neither doth the force of every particular Animal lie in the Bulk of the Body, but in ſome particular Part of their Bodies, as the Lions force lies in his Claws, the Bulls in his Horns, the Dogs in his Teeth, and Mans in his Arms or Hands, Birds in their Bills and Talons, and ſo of all ſeveral Animal Shapes, the Strength and Force is in ſome particular Part; alſo the Manner and Form of Animal Shapes gives them ſeveral Proprieties, Qualities, or Faculties, according to each Kind or Sorts of Shapes, as the Shape of Birds cauſes them to Fly, the Shape of Fiſh cauſes them to Swim, the Shape of Worms cauſes them to Creep, the Shape of Beaſts cauſes them to Trot, Amble, Gallop, or Run, and ſome particular Sorts in one and the ſame kind, as Fiſh, Fowl, Beaſts, Worms, and the like, are more Agil, or leſs Agil, for ſome ſort of Fiſh ſwim glider than others, by reaſon of the Shapes, and ſome Birds fly ſwifter and longer or higher than others, and ſome Beaſt run or gallop faſter and amble eaſier than others by their Shape, but Man ſurpaſſeth all other Shapes of Animal Creatures, by reaſon Man hath a part as it were of all other Creatures, by which he can Imitate the Local actions of moſt of other Animal Creatures, as alſo

alſo Over-power other Creatures meerly by his Shape. But to conclude this Chapter of Local Animal Shapes, the different Local Animal Shapes in ſeveral Kinds and particular Sorts of Animal Creatures joyned with Local and Animal motions proper to each Shape, cauſe the ſeveral or different Proprieties, Qualities, and Faculties in every particular Kind, and every particular Sort in each kind of Animal Creatures.

CHAP. VII.

Of the External Animal Motions.

TO expreſs all Exteriour Motions belonging to Animal Creatures, is paſt my Power or Wit, but ſome few I will ſet down; as for Exteriour motions in Animals, they are Running, Jumping, Hopping, Leaping, Climing, Trotting, Ambling, Gallopping, Turning, Winding, Rowling, Creeping, Crawling, Flying, Soaring, Towring, Swimming, Diving, Digging, Pitching, Piercing, Throwing, Rending, Breaking, Cutting, Carving, Printing, Wreathing, Twiſting, Drawing, Driving, Shoving, Heaving, Lifting, Bearing, Carrying, Holding, Staying, Griping, Wringing, Graſping, Infolding, Squeeſing, and millions the like Exteriour motions, of which Mans Shape for the moſt part is free, apt, and prompt to do or act, having every Part and Member free, and prompt for divers

divers Motions and Actions; neither can any other Animal Creature but Man move their Eyes, Hands, and Feet in ſo many ſeveral Motions, nor in ſuch Numbers, Meaſures, and Glances as Men, ſo that Mans chief Excellence from other Creatures lies in his Shape; as for the Exteriour doors and paſſages of Animal Shapes, they are the Pores of the Skin and Fleſh, the Eyes, Ears, Noſtrils, Mouth, and other Parts, in which paſſages and doors are made all the Exteriour Senſes, as Sight, Hearing, Smelling, Taſting, and Feeling, or Touch, but Touch is a general Senſe which I ſhall more fully diſcourſe of at the latter End of my Book, but the Interiour Senſitive motions are Appetites, as I ſhall alſo more fully diſcourſe of.

CHAP. VIII.

Of Mans particular Shape.

MAn in his Shape is different from all other Animal Creatures, and hath an Upright Shape which other Animal Creatures have not, which Upright Shape makes him not only fit, eaſie, and free for all ſorts of Local motions and Actions, but for Speech alſo, for being Straight in a ſtraight and direct Line, his Belly, Stomack, Cheſt, Neck, Throat, and Mouth, as alſo the Organs, Pipes, Nerves, and Sinews are ſtraight and equal to each other, which makes his Voice ready and apt for all manner of Sounds, and his

Tongue apt for Speech, which other Creatures by reaſon of more bending Shapes and winding Organs are not ſo apt for, as Man is, neither is the Sound of other Creatures Voices Melodious as Mans, for theirs is either too Flat, or too Small, or too Hoarſe; and as for Speech, when any other Creature ſpeaks, it is Conſtrained, Forced, and not Natural; but Birds being more Upright and ſtraight from their Breaſt to their Heads, than Beaſt, are more apt for Speech than Beaſts, but yet it is Conſtrain'd; but Mans Upright Shape is apt to all ſorts and kinds of Exteriour Motions, for moſt Motions belonging to other Animals, are knit, or tied, or joyned to Mans Shape, ſo that Mans Shape is partly the Ground-work of all other Animal ſhapes, and all other Animal motions are as it were mixed in Mans Shape.

CHAP. IX.

Of the Mind.

NOw I have diſcourſed of the Body of a Man, as in Producing or Creating, as alſo Infancy, Youth, and Age, Life and Death, and of Exteriour Motions and Shapes, give me leave to diſcourſe of the Mind of that Animal named Man, and as I have ſaid in the firſt Part of my Book, that there is a Purer and Agiler degree of Animate matter, than the Senſitive, which Pure degree I name Rational; This Rational

tional matter is as the Eſſence of Senſitive, as Senſitive is the Eſſence of the Inanimate part of matter; this Rational degree of matter is the Mind or Soul of the Only and Infinite matter, as the Senſitive is the Life of Only and Infinite matter; this Rational matter Lives in the Senſitive, as the Senſitive in the Inanimate matter, ſo as all three Degrees are intermixt; but this Rational matter moves not as the Senſitive doth, upon the Inanimate matter, but moves by it Self, and in it Self, in Meaſure, Number, and Figure; but the Rational Animate matter being in the Senſitive, and the Senſitive Animate in the Inanimate, which makes each degree inſeparable in their Parts, but not in their Effects, for their Effects are different, at leaſt not juſt one, but being inſeparable in their Parts, every Creature is Compoſed and Indued with each degree, and amongſt other Creatures Man, for as the Body increaſes in Growth and Life, ſo the Mind increaſes with Knowledge and Underſtanding; for the Rational Animate matter comes in, and goeth out with the Senſitive and the Inanimate matter, both in their Producing, Finiſhing, and Diſſolving; and as Food nouriſhes the Body, ſo Experience nouriſhes the Mind, that is the reaſon that a Man hath more Knowledge and Underſtanding than a Child, by reaſon the Mind, as the Body, increaſeth by degrees; but it is to be obſerved, that the Rational motion doth alſo move ſometimes Irregularly, as it doth Regularly, which is the cauſe of

Fools or Changelings, as Innocents, for the Animate matter both Senſitive and Rational doth not alwayes or at all times move Regularly, although for the moſt part it doth, but when it doth move Irregularly, it cauſes weak Bodies, and weak Minds, but the Rational and Senſitive Animate motions in one Figure or Creature, do not alwayes move Irregularly at one Time in one Figure, though ſometimes they do, for ſome Times and in ſome Figures the Senſitive motions move Regularly, and the Rational Irregularly, and in ſome Figures and at ſome Times the Senſitive motions move Irregularly, and the Rational motions Regularly, but I ſhall diſcourſe more of this Subject at the latter End of my Book, where I diſcourſe of the Diſeaſes of men; but to conclude this Chapter, the Interior Rational motions in Animal Creatures, eſpecially Men, are, Thinking, Contemplating, Conceiving, Examining, Reaſoning, Judging, Knowing, Underſtanding, Memory, Remembrance, and the like, as alſo Love, Hatred, Fear, Doubt, Hope, Anger, Envy, Joy, Grief, and many the like, but there is a ſtrong Sympathy, and an Agreement between the Senſitive and Rational motions in one and the ſame Figure or Creature: Firſt, as being both of Animate matter, which makes or cauſes that Sympathy; Next, as being Circumferenced in one Figure or Creature; Thirdly, as being Fellow-Labourers that joyn in one VVork, or as Fellow-Servants in one Houſe, or as Parents and Children in

in one Family, but when as the Senſitive motions and Rational motions diſagree in one Figure or Creature, as ſometimes they will, as when the Rational Animate matter moveth not Sympathetically with the Senſitive, or that the Senſitive Animate matter moves not Sympathetically with the Rational; as when the Appetite moves one way, and the Reaſon another way; but for the moſt part they agree and are Friends, as Parents and Children. But I ſhall more fully diſcourſe of each Degree in one and the ſame Creature and Figure, as Man, or Particular Men.

CHAP. X.

Of the Mind and Body of Man.

NOw I have diſcourſed of the Body and Mind of Man apart, give me leave, Noble Readers, to diſcourſe of them together; Firſt, to make my Diſcourſe clear, is to inform you, although you may inform your ſelves by human Senſe and Reaſon, that, though Life and Reaſon, which is Senſitive Knowledge and Rational Life, or Rational Knowledge and Senſitive Life, is Rational and Senſitive Animate Matter and Motion, which Animate Matter and Motion is Infinite, yet by Self-motions hath divided it ſelf with the Inanimate matter into particular Figures, which cauſeth particular Knowledges, both of Senſe and Reaſon; for as Senſitive

Senſitive Life is as a weaker Knowledge than the Rational Knowledge, ſo the Rational Life is a ſtronger Life than the Senſitive; for all Animate matter, both Senſitive and Rational, is Life and Knowledge, as Living Knowledge, and Knowing Life: But Self-motion dividing Infinite Matter into Infinite Figures or Creatures, makes ſeveral Knowledges in ſeveral Kinds, and particular Sorts in every Kind of Figures or Creatures; and not onely in ſeveral Kinds and particular Sorts in every Kind of Creature, but in one and the ſame Kind or Sort of Creature, as that every particular Part of the Body hath a particular Senſitive Knowledge, ſo that the Senſitive Animate Matter and Motions make ſeveral Knowledges in ſeveral Parts of the Body: As for Example, Each Senſe hath a particular Knowledge, for the Eye knows not what the Ear hears, nor the Ear knoweth not what the Eye ſeeth, nor the Noſe knows not of the Ear's hearing or the Eye's ſeeing, nor the Ears nor Eyes of the Noſes ſmelling, nor all thoſe Senſes of the Tongue's taſting, nor the Tongue knows nothing of the other Senſes; and Touch, though it be a general Senſe, yet every ſeveral Touch is a ſeveral Senſitive Knowledge: The like for the Appetites, for every ſeveral Appetite is a ſeveral Senſitive Knowledge, as Hunger, Drought, and the like other Appetites: As alſo every ſeveral Pain, or ſeveral Pleaſure, in every ſeveral Part of the Body, is a ſeveral Senſitive Knowledge; but the Rational Animate matter

and

and motions have a more general Knowledge, throughout, and of every particular Part of the Body, by reaſon it is not ſo mix'd with the Inanimate matter as to be troubled with, or to labour on the Inanimate matter, but moves purely and entirely on or in its own Matter, by which freedom, the Rational matter and motions take a general Notice, as alſo particular Notice of the Senſitive motions, in every ſeveral Senſe and Appetite; as alſo of the outward Objects that the Senſes preſent to the Rational. But this is to be obſerved, that, though the Rational matter is in all the parts of a Figure or Creature, yet not ſo Active, or ſo Much in ſome parts as in others; for in the Denſed parts, the Rational matter and motions cannot move ſo Agily as in Rare or porous parts, nor in Straight parts ſo Free as in More compoſed parts.

CHAP. XI.

Of the Communication or Information between the Mind and Body, as between the Senſe and Reaſon.

THe ways of Information, Communication, Trade and Traffick, or Entercourſe amongſt ſeveral Creatures of all kinds and ſorts, are ſo divers and various, as I neither can inform my ſelf, nor my Readers; for there is not onely Entercourſe, Communication, Trade, and Trafick of ſeveral Degrees and Temperaments of Matter

ter and Change of Motion in Productions, Procreations, and Operations of ſeveral Degrees, Changes, and Temperaments, in creating ſeveral Kinds and Sorts of Creatures, and Particular creatures in each Kind and Sort: But there be divers other Employments for the Animate matter and motion to buſie it ſelf with, not onely in Creating, Nouriſhing, and Strengthning, and Inlarging, and Perfecting a Figure, and to make ſuch or ſuch Senſes or Appetites, as alſo Thoughts, and the like, or to work to the conſiſtence and uſe of the Creature, but to furniſh and feed each Senſe, Appetite, or Thought with Variety, preſenting every Senſe, Appetite, and Thought with ſeveral Objects: But I ſhall not offer or endeavour to expreſs more than the human Senſe and Reaſon of one Creature, ſuch as I am, can expreſs; Wherefore I ſhall diſcourſe onely of the Entercourſe, Trade, Trafick, and Information of the Rational and Senſitive matter and motions amongſt Men; as alſo of the Commerces and Information betwen the Senſe and Reaſon in one Man, as between the Mind and Body of a Man; as for the Body of a Man, there be many outward ſeveral Doors or Paſſages, which we name Senſes; Theſe Senſitive Paſſages are the ſeveral Highways that the Animate matter travels thorow, as in, to, and from; but the Senſitive travels with Burdens of Inanimate matter; but the Rational hath no Encumbrances, being Free to it ſelf; alſo the Senſitive matter and motions make

make Prints and Figures of all outward Objects that are in diſtance of the Senſitive Paſſages or Doors; as alſo make thoſe ſeveral Senſitive Prints or Figures of ſeveral Objects, on the ſeveral Organs and Parts of the Body, according to the Propriety of each Senſe, Organ, Part, or Object; and then theſe Senſitive Prints and Figures, which the Senſitive motions make of outward Objects in the Senſitive Paſſages and Parts of the Body, the Rational Animate matter in the ſame Body ſtreight moves its own Matter and Motions in the ſame Prints or Figures, by which it informs it ſelf of the Senſitive Actions; which Information is named Knowledge or Underſtanding; and when the Rational Animate matter and motions make Voluntary figures, that is named Imagination or Conception; and if the Senſes pattern out thoſe Voluntary Rational Figures, it is named Invention: But this is the way, or manner, or form of Information between the Mind and Body, as Senſe and Reaſon, of which I ſhall diſcourſe more fully in my following Chapters; but this is to be obſerved, that the Information between Man and Man, is ſomewhat like the Information between Mind and Body, which is Senſe and Reaſon; alſo it is to be obſerved, that the chief Places in the Body that are moſt proper for the moſt Commerces, Trade and Traffick, both for Forein Commodities, which is outward Objects, as alſo for Home-profit, which is Nouriſhment, Health, and Peace, as alſo for Variety

and Change, are the Outward Senſitive paſſages, and the Inward Vital parts, both for the Senſitive and Rational matter and motions, to move and work moſt variouſly in; as for the Rational, although that Matter and Motion is in all the parts and places of and in the Body, yet the chief places or parts of the Body, in which the Rational matter moves more variouſly, are the Head and Heart. But, to conclude this Chapter, The Commerce, Trade, and Traffick between the Senſitive and Rational parts and motions in Men, cauſe Conſideration, Examination, Diſtinguiſhing, Obſerving, Contrivance, Reaſoning, Arguing, Approving, Diſapproving, Judging, Acquaintance, Knowledge, and Underſtanding; alſo Love, Hate, Anger, Joy, Hope, Doubt, Delight, Pleaſure, Admiration, Deſire, and the like: Theſe thoughts in the Rational mind are cauſed from the Senſitive Information and Commerces; but when the Information is preſented from the Reaſon to the Senſe, thoſe Informations cauſe or produce Bodily Induſtry, as alſo Arts, Travels, and Diſcoveries; alſo Diſcourſe, Talking, Laughing, Singing, Dancing, Embracing, Bluſhing, Trembling, Paleneſs, Sighing, Groaning, Shreeking, Striking, Fighting, Pains, Sickneſs, and many the like. But this is to be obſerved, That all Informations, Trade and Traffick in the Mind and Body, are preſented from the one to the other often to and again, but the Mind in one Body cannot inform the Mind in another Body, as for one Man to expreſs

expreſs his Mind to another Man, but by the Senſitive motions and Senſitive paſſages, as by the Arts of Words, Letters, Hieroglyphicks, Lines, Notes, Numbers, and the like.

CHAP. XII.

The Imitations between the Senſitive Motions of the Body, and the Rational Motion in the Mind.

THe Rational Animate matter being not incumbred with working on the Inanimate matter, is more Looſe, Free, and Agil in Self-motion, than the Senſitive Animate matter is, which is the cauſe that the Rational motions of the Mind are Agiler, and more ready to pattern out the Senſitive Prints or Figures, than the Senſitive is to pattern out the Rational; for both the Senſitive and Rational motions imitate each other, I will not ſay always, for the Rational motions can make ſuch Figures or Prints, as the Senſitive cannot imitate, becauſe the Senſitive is bound to the Inanimate part of Matter, but for the moſt part each Degree of Animate matter imitates the others Motions, as when Conceptions are put into Arts, and Arts into Memory; as alſo there is an Imitation of Motions between Touches and Thoughts, for Thought is a Rational Touch, and Touch a Senſitive Thought; and as there be many ſeveral Senſitive Touches, ſo there are many Rational

Thoughts; and as every ſeveral Part of the Body, although never ſo ſmall, hath a Senſitive Knowledge, ſo every part of the Mind hath a Rational Knowledge, both which is Senſitive Life, and Rational Life, the one the Creator, and the other the Surveyer, the one the Labourer, the other the Deſigner, which is the cauſe of the reſemblances of Motions in each Degree; for when the Rational Animate matter and motions move according to the Senſitive Prints and Figures, then the Rational Surveyeth the Senſitive Works, and when as the Senſitive moves according to the Rational Figures, Numbers, and Meaſures, then the Senſitive moves according to the Rational Inſtructions.

CHAP. XIII.

Of the Various Motions in the ſeveral Parts of Man.

THe Various Motions both of the Senſitive and Rational in one Body and Mind, as they are not to be numbred, for there are millions of ſeveral Objects, of Sight, Hearing, Smelling, Taſting, Touching, or Feeling, but Touch is a general Senſe, for though all the Senſes are not Touch, yet Touch is in all the Senſes; and as there are millions of Various Senſitive motions in the Body, ſo there are millions of Various Rational motions in the Mind of one Man; but to expreſs all the ſeveral Motions that are in the Body

Body and Mind of a man, made by Senſitive and Rational Animate matter, is impoſſible any other wayes than by Probability and Conjecture; but as there are ſeveral Motions in one and the ſame Part, ſo there are ſeveral Motions in ſeveral Parts, as alſo ſeveral Motions in ſeveral Creatures; but for that Creature named Man, I obſerve that the Rational Animate matter, as alſo the Senſitive Animate matter, moves other wayes in the Head of man than in other Parts, and that the Head is as the Court or Counſel of all the Body; as for the Heart, it ſeems to have the next place of Supremacy, yet there are other Parts that ſeem as Powerfull or as Uſefull as that Part; but I ſhall not treat of the ſeveral Motions of every ſeveral Part in and of a mans Body, I will leave that Work to thoſe that are Wiſer than I, or have more Experience; but ſhould I treat of the Appetites of the Body, which I cannot well tell how well to do, but I ſhall Expoſe my Self to be cenſured by Fools, and there are many Fools in the World; for though Infinite nature is Wiſe, yet particular Creatures are moſt Fools, by reaſon, Knowledge is divided into Parts, and there are not many that have great or much Shares of Knowledge in their Parts.

CHAP.

CHAP. XIV.

Of the Coherence of ſeveral Motions in ſeveral Parts of a Mans Body.

AS for the Senſitive and Rational matter and motions in the Head, they are partly Intire Motions, as belonging to or proper for that Part of the Body, and partly joyning to the other Motions proper to other Parts of the Body; as for Example, a man ſeeth a fair and handſome Woman, he Sees her, Loves her, and Deſires to Injoy her, as to Procreate by her, the Senſitive Print of the Woman is made in the Eye, or Optick Nerve, the Thought or Figure of the Womans perſon is made by the Rational matter in the Head, the Paſſion or Affection for or to the Woman is made in the Heart, the Appetite towards the Woman is made in the Womb; all theſe Several Motions in ſeveral Parts cohere or link together ſo cloſe as to ſeem to be but One Motion, and ſo cloſe as if it were Individable for the Time, as the Object, Appetite, Paſſion, and Thought, and yet all are Several, as ſeveral Degrees, and ſeveral Motions in ſeveral Parts of the Body, and Mind, and Object.

CHAP.

CHAP. XV.

Of the Ebbing and Flowing of Animate Matter.

AS I ſaid, that the Senſitive Animate matter Lives in dull or Inanimate matter, and the Rational Animate matter in the Senſitive, yet there is more or leſs Quantity, for I do not think every Part or Degree of matter lies equally in every Figure or Parts of Figures, but ſometimes ſome Parts or Figures have more, and ſometimes leſs, although all have ſome, yet not at all times the like Meaſure or Quantity; as the Blood in Animal Creatures, as in Men, although the Veins are ſpread all over or quite throughout the Body, yet ſome Veins are much ſmaller than others, as there are the Arteries, and ſome others, large full Veins that lie above the Arteries, ſo there are thoſe Veins that are named Hair Veins, that ſpread to the Circumference of the Body; alſo the Veins are not equally fill'd, neither are the Veins ſo full of Blood at ſome times as at other times, yet the Creature, as Man, cannot Subſiſt or Live without Blood. So there is no Matter without Animate matter, nor no Creature can be Created, or Subſiſt when Created, or Diſſolved, but of neceſſity muſt be Created, Maintain'd, or Diſſolved by Animate matter and motion, yet every Creature, or Figure, or Part, is not indued alike, neither doth the

the Animate matter move alike in every Creature, Figure, or Part; neither is one and the ſame Kind or Sort of Creatures, Figures or Parts indued alike, no, nor the ſame Creature, Figure or Part indued at all times alike, but at ſome times more and ſome times leſs, like as a Man's Blood, which will ſome times be more, ſome times leſs, as a Man hath leſs Blood after an opening of a Vein, or by Sickneſs, or Faſting, or Obſtructions, and the like; and as there is more Blood in ſome parts of the Body than in others, ſo there is more Animate Matter in ſome parts than in others, as ſome parts will have more Senſitive Animate matter than other parts, as the Senſitive paſſages, or thoſe parts that have Appetites have more Senſitive matter than ſome other parts, ſo ſome parts have more Rational matter than other parts, as the Head, Heart, Liver, Womb, and the like; yet none of theſe parts is indued at all times alike, but ſometimes more, and ſometimes leſs, according to ſeveral Occaſions, Ways, Accidents, and the like, which will be too tedious, and not proper for this Chapter to treat of; but the Animate matter in every particular Figure or Creature Ebbs and Flows like as the Sea; for although there is at all times Sea, yet not at all times Full Water, nor at all times Low Ebb in all places alike.

CHAP.

CHAP. XVI.

Of Motions in the Head and other Parts of a Man's Body.

I Obſerve, that the Rational Animate matter in the Head moves as often in Sculpt Figures, as in Flat Ground Figures; but in the Heart and ſuch parts, the Rational matter moves at all times in Ground Figures and Motions, as I may term them, as in Numbers and Meaſures in ſeveral Motions; the Reaſon is, that the Senſitive Animate matter prints Sculpt Figures in the Brain or Optick Nerve, and in none other parts of the Body, unleſs it be in Procreation, and that is in Motions of Creation, and not Motions of Preſentation; yet the Rational Animate matter in the Head moves partly in that manner of ways as Senſitive Creating motions, onely the Rational motions Create in an inſtant of Time, whereas the Senſitive Motions Create by Degrees.

CHAP. XVII.

The Rational Figures, as Thoughts, made in the Head.

WHen as the Rational matter and motions figure the Senſitive Prints, and then move theſe Figures, partly one way, and

partly another way; or that the Rational motions intermix their own Voluntary Figures with the Figures of the Senſitive prints, it is Diſputing, Arguing, Reaſoning, and the like in the Mind; alſo when as the Rational matter and motions do divide in ſeveral Figures, and that the Figures of the Senſitive prints compare with the Voluntary figures, it is Examination, Conſideration, and Judging; but when as the moſt of the Figures Voluntary, or moſt of the Figures of Senſitive prints, or moſt of any of the Figures ſympathize and joyn for agreement of the moſt is Judgment; and when every Rational figure is perfect and diſtinct without Intermixtures and Irregularities, it is Underſtanding; and when the Rational figures are Voluntary, not made by the Senſitive prints, it is Conception, Imagination, Fancies, Ideas, and the like; and when as former Figures are Diſſolv'd, either Voluntary, or made from Senſitive prints, it is Forgetfulneſs; and when as thoſe former Figures are Repeated, as to be compoſed again, it is Remembrance; and the preſent Figures, either Voluntary, or from the Senſitive prints, it is Memory; and when as Figures are Imperfect, and Motions Irregular, it is the Maze of the Mind or Thoughts, that is, when there is no perfect Figure, there is no perfect Thought; alſo when as the Rational matter and motions move beyond the Senſitive power or propriety, it is Faith; and when as the Rational matter and motions, or figures, move not from place to place,

place, but ſettle in One place, it is Belief; alſo when as the Figures of Senſitive prints, or Voluntary figures Sympathize, it is Approving, Commending, Applauding, Admiring, and the like; but if thoſe Figures and Notions Antipathize, it is is Diſapproving, Deſpiſing, Rejecting or Scorning; Thus much for the Sculpt-figures in the Head, but the Thoughts or Memory of Sound, Sent, Taſte and Touch, are Flat Ground Figures and Motions; alſo for Speech, all which are Letters, Notes, Numbers, Lines, and the like, which are made by Printing or Preſſing motions, and not Carving motions, or Caſting motions.

CHAP. XVIII.

Of the Rational Motions in the Heart, or ſuch Lower Parts.

NOW I have deſcribed the Rational Figures or Thoughts in the Head, I am to deſcribe the Rational Thoughts or Paſſions in the Heart, which are all made by, or in Flat Ground Figures and Motions; but to deſcribe ſuch Motions and Figures well, properly, and skilfully, requires a learned Mathematician or Arithmetician, as an *Archimedes* or *Euclides*, to deſcribe Meaſures, Figures, Numbers and Notes; wherefore I will onely expreſs the Way, or Form, or Manner of my Opinions; I will begin with the prime paſſion of Love, as

thus, when as the Rational matter and motions in the Heart, make and move like Notes ſet, or as ſet Notes in Muſick, Harmoniouſly, it is Love, and when ſuch Notes are ſet as for Light Airs, it is Joy, and when as Notes are ſet as for Grounds of Muſick, it is Seriouſneſs, when they are ſet as for the Gravity of Muſick, it is Melancholy, and Diſcord of Motions is Hate, Diviſions in Diſcords is Anger, Suſpition is falſe Notes, Doubt is as Broken, or crooked Lines, and Half Notes; Thus much for Notes, now for Numbers; Envy is like Odd Numbers, Fear is like Falſe Numbers, Ambition is like Multiplication, Inconſtancy is like Subtraction, Truth or Juſtice is as Demonſtration, Conſtancy is as a Centre in a Circle, Self-Love or Partiality is made like a Flat Ground Figure, as when Innumerous Lines are drawn or gathered into One Point; the deſire of Praiſe and Remembrance is, when as the Rational matter and motions, Figure Prints and move in Letters and Words of Praiſe, as alſo in all ſuch Figures as Senſitive Architect. Theſe Figures, Prints and Motions do move in Numerous Lines, as from one Point or Centre towards a Circumference; But enough of theſe Deſcriptions, unleſs I had more Learning, for I fear theſe few Deſcriptions are Fooliſhly expreſſed.

CHAP.

CHAP. XIX.

The Deſire of Fame.

THE Deſire of Fame is a Self-deſire of Self-praiſe and Remembrance, which cauſes both the Rational matter and motions, and Senſitive motions and matter in the ſame Figure or Creature, to be induſtrious to Study, Invent, Frame and Build, with all their Faculties, Power and Might, for which both the Senſitive and Rational matter and motions do inform each other, and counſel each other, and help each other what they may; for the Senſitive matter and motions endeavour to declare the Rational figures and motions to other Creatures of the ſame Kind, and the Rational endeavours to inform the Senſitive, what they ſhould declare, as what Words ſhall be ſpoken, or what Letters written, or Pictures drawn, or Statues cut, or Pyramids raiſed, or Houſes built, to expreſs their Fancies, Invention, Ingenuities, Obſervations, Judgments, Underſtanding, and Singularity to all Creatures, in all Places, and all Ages, in all Times, and Eternity.

PHILOSOPHY.

PART III.

CHAP. I.

Of Imagination or Conception.

NOtion, Imagination, or Conception, is made by the Rational matter and motions, without the Aſſiſtance of the Senſitive matter and motions, that is, without the Senſitive Objects and Prints in Senſitive Paſſages; but the Notions in one Mind may be like the Senſitive Objects, or Prints, or Creatures, or Motions, which are made by the Senſitive matter and motions in other Men, or any other Kind or Sort of Creatures, for the Rational matter and motion having Power of it Self, to move it Self into any Figure, Number, or Meaſure, may chance, nay it doth often move its Self, and Motion like to the Senſitive Objects, and prints Creatures and Motions without the Senſitive aſſiſtance; This is the reaſon that the Imagina-

tions

tions or Conceptions do often prove true, according to what was Imagined, without any Information of the Senſes; but when the Mind informs the Senſes, then the Senſes put, or at leaſt indeavour to put, the Minds Notions or Conceptions into Arts or Sciences; alſo the ſame Notions, Conceptions, and Imaginations in one Mind, may be in an other Mind, each Mind being Unknown to each other. But to conclude, all Notions, Imaginations, Fancies, Ideas, and the like, are made much after one and the ſame manner of way, the difference is only in the particular Notions, Imaginations, and Ideas; as for Example, between two or more of Notions, or two or more Ideas or Imaginations.

CHAP. II.

Of Conjectures and Probabilities, and Invention, Arts, and Sciences.

CONjectures and Probabilities are made in the Mind, by the Rational Animate matter and motions; for though the Rational motions be ordinarily after the Senſitive Prints, yet not alwayes, but ſome times after their own Appetites; neither are the Rational motions alwayes exactly to the Senſitive Prints, but alter the Senſitive Prints in their Figures, making the Figures of thoſe Prints otherwiſe than thoſe Prints were preſented, either Adding or Subtracting their ſeveral Figures of ſeveral Prints of

of ſeveral Objects, as alſo Compoſing ſeveral Figures of ſeveral Prints of ſeveral Objects ſeveral wayes than they were preſented, by which the Rational Animate matter and motions diſcover new Inventions, and when they have diſcovered or made new Inventions, thoſe Motions declare them to the Senſitive motions, and the Senſitive motions put them into Arts; and when the Senſitive motions diſcover divers Objects, or new Objects, which the Senſitive paſſages cannot properly, or fitly, or clearly Print or preſent to the Reaſon, then the Rational motions move ſeveral wayes to make the Prints perfect in their Rational figures, which Figures being expreſs'd or made known by the Senſes and Senſitive motions, are named Sciences; for though the Senſitive motions indeavour to preſent perfect whole Prints of whole Objects, yet they cannot alwayes do it, but are forced to preſent Pieces and Parts, by reaſon the Senſitive Paſſages are not capable to receive at one time ſome whole Objects, for the Senſe of Seeing is not capable to receive the Print of the Object of the whole Earth, or the Object of the whole Sea, or the Object of the whole Heaven, no nor a great Part of them, ſo that the Senſitive motions in Senſitive paſſages are forced to Contract the Prints of thoſe great Objects to the capacity of the Senſitive paſſages by Art, as Globes, Compaſſes, and the like; neither can all the Whole be known but by Pieces and Parts, by reaſon, all Knowledge both Senſitive and Rational

onal is divided into Parts and Particles, but the Parts and Diviſion of Knowledge cauſes Probabilities and Conjectures, Obſervations, alſo Arguments and Diſputations, Imaginations and Fancies, whereof ſome prove true, ſome prove falſe; alſo by reaſon the Senſitive knowledge lies in Parts, it cauſes Errors, Miſtakes, and falſe Informations, as alſo Pains, Sickneſſes, and the like. But, to conclude this Chapter, the Rational matter and motions in the Mind, do find out the Truth of many Particular things, as alſo the Generalities of ſeveral Things, Cauſes, and Effects out of the ſeveral parts and pieces, as alſo Motions from Outward objects and Senſitive motions.

CHAP. III.

What makes Arguing and Diſputing, both with a Man's ſelf, or Others; or with the Senſe and Reaſon.

THe Cauſe or Motions that cauſe Arguing or Diſputing, is, when the Rational motions and Senſitive motions do mix or intermix together, and not move apart, but do intangle each other; or when as the Rational motion intangles its own Motions in its own Matter, which cauſes Obſtructed Underſtanding and Senſes, which cauſes Diſputations, alſo Diſputations in ſeveral Men, as alſo one and the ſame Man; as when the Rational figures of one and

the ſame thing move ſeveral ways, either in two Men, or one Man's mind; as for Example, Two Men have the figure of the Sun in each Mind, and that Figure moves one way in one Man's mind, and moves another way in another Man's mind; or that the figure of the Sun moves one way, and then another way in one Man's mind; Alſo in Senſitive motions, as when the Outward objects are not plain for the Senſes to picture out, or that the Senſes miſtake, alſo when as the Senſitive and Rational motions move mixtly, as partly one piece or part of a Figure, and partly another, or more or leſs; alſo when as the Senſes or Rational motions make leſs or more parts of Figures than naturally they are; as for Example, The Senſe of Seeing will ſee double or treble one Object, or not ſee all Parts of an Object, but ſee as in a Miſt ſome parts, and not other parts; So may Examples be brought of every ſeveral Senſe and Object; alſo the Rational motions do oftentimes make more or fewer Figures from one Object, and from many ſeveral Objects but one Figure; as for Example, from the Object or Subject of One Word preſented through the Ear, the Rational motions will make a Long Diſcourſe in the Mind, and from many Arguments preſented through the Ear ſhall make but one Judgment; Likewiſe through the Eye from many Prints makes but one Figure, and from one Print many Figures; as from the print of a Pint of Water makes many Figures of Drops of Water, and from

from many Drops one Pint of Water, from one Fire many Sparks, from many Sparks one Fire; alſo from all the Senſes and Objects, as from one Figure many Parts, and from many Parts one Figure; alſo the Rational motions may make Diviſions and Subtractions, as alſo Compoſitions of the ſame Matter as in it Self, as Joyning ſome Parts of one Figure to an other, and Separating and Compoſing its own Matter without the Senſitive Prints; but all imaginary Arguments and Diſputations are ſomewhat after the manner of Dreams, as ſome may prove true, for the moſt part they are falſe; but as for Dreams, I ſhall fully diſcourſe of them towards the latter End of my Book.

CHAP. IV.

The different Degrees of Man's Knowledge.

ALl Men have not alike Degrees of Knowledge and Underſtanding, nor alike Degrees of Conception, Imagination, Fancy, and the like, nor alike Degrees of Appetites, for ſome Men have not had ſo many nor ſuch Varieties of Objects preſented to their Senſes, or by their Senſes to their Reaſon, as others have had; others have ſome Defect either in the Senſitive parts or Rational motions, as not to be capable to make Prints of Objects, or not to preſent Prints or to receive Prints orderly; others have both their Senſitive and Rational motions Weak, which

weakneſs is the cauſe of few Appetites, and Imaginations, or Conceptions; others, their Rational and Senſitive motions are Irregular, and that makes Fools and Mad-men.

CHAP. V.

Of Rational Knowledge in Parts.

THe Rational Knowledge is confined in Parts as well as the Senſitive, for the Rational motions in one Figure are ignorant of the Rational motions in an other Figure; for one Man doth not abſolutely know what an other Man knows, nor one Man doth not imagine what an other Man imagines, one Man may gueſs an other Mans thoughts, but not know them, but by Confederacy and Informations of the Senſes; alſo the Rational motions in Rational matter, in one and the ſame Figure, as in one Man, may ſometimes be ignorant of each other Motions, although the Rational matter and motions, that is diſperſed throughout all the Body, hath a better Correſpondence with it Self, than the Senſitive Animate matter hath, by reaſon it is not incumbred with the Dull or Inanimate part of Matter, yet ſometimes ſeveral Motions are ignorant of each other, as the Paſſions, or the Thoughts in the Heart will be ignorant of the Thoughts in the Head, and the Thoughts ignorant of the Paſſions in the Heart, as I ſhall more fully treat of; alſo the Rational Knowledge doth

doth ſometimes not take notice of the Senſitive Knowledge or Motions, for many times, when as the Rational matter is buſie in moving in ſome Phantaſm, if any thing touches the Body, or when as the Senſitive motions Print outward Objects on the Senſitive paſſages, the Mind takes no notice of them, being buſie or earneſt in making Voluntary Figures.

CHAP. VI.

Of Unities or Equalities.

IF there be Infinite degrees of Matter, and Infinite changes of Motion, and Infinite ſhapes of Figures, then the Degrees, Changes, Shapes or Figures may meet in Unities or Equalities, and Sympathize together; as for Example, if one Man ſhould have the Strength of two men or four men, then the Strength of two or four men is not more than the Strength of one ſingle man, which ſingle man equals two or four men; alſo if one Line ſhould be divided in four Parts, it ſhall be but equal to a Line undivided; alſo for Numbers, although two and one be odd Numbers, yet three and three are equal Numbers. The like Examples may be given for all Degrees, changes of Motions, and different Figures.

CHAP. VII.

Of Influence.

AN Influence is, when as the Senſitive and Rational matter and motions in divers or different or ſeveral Creatures or Figures, in divers or different or ſeveral Places, Times, Parts, or Particles, move or work Sympathetically to each other; and certainly, there is an Influence amongſt all Creatures, for all Creatures being made of the Only and Infinite matter, and there being a Union in its Nature, the Creatures of this Only matter muſt neceſſarily have an Influence upon each other; but if there were no Motion, there could not be Influences, for it were impoſſible an Influence could be without Motion, and as impoſſible, a Motion could be without Matter.

CHAP. VIII.

Of Operation.

ALl Figures or Creatures have an Operative Power, which Operation is made by Sympathetical and Antipathetical motions in ſeveral Creatures or Figures, or Parts of Creatures or Figures; the Aſſiſting Operation is cauſed by one, the Deſtructive Operation by the other, like as Poyſon and Cordials, but Operations are as Infinite as Motions.

CHAP.

CHAP. IX.

Of the Procreation of Thoughts, and of Faith.

I Do not perceive in human Senſe and Reaſon, but that the Mind procreates like as the Body, not onely with the Body, as being mix'd together, as that the Rational Animate matter and motion lives, and is intermix'd with the Senſitive matter and motions, and the Senſitive matter and motions mix'd with the Inanimate matter; but I mean by a Procreation in the Mind, as ſome Thoughts will produce others, and ſome Paſſions will produce others, which is, that Motion makes from ſuch Paſſions other Paſſions; but whether ſuch firm or fixed Thoughts, as that we name Faith or Belief, can produce an Outward Effect, eſpecially ſuch effect, as is not uſual to be effected in Natural Works, my Human Senſe and Reaſon cannot well perceive, unleſs ſuch a Thought, that is fix'd cloſe in conjunction with ſome particular Outward object, could produce ſuch or ſuch effects, as Slips ſet in the Earth, or Seed ſown in the Earth, ſhould produce Trees and Flowers, but then Doubts, as cold Northern Winds, or ſharp biting Froſts, nip and kill, as to deſtroy the Buds of Faith, which hinders the Effects from perfection; but it is probable, that if there be a Sympathy between the Outward object and Inward thoughts, it may work ſome effect,

but

but not ſo much as to remove Mountains; alſo as there is Procreation of Thoughts, ſo there is Procreation of Words; and as there are Natural Procreations, ſo there are Artificial Procreations, as the Procreation of Arts, and all Arts are Creatures; the onely difference is, that Nature Creates not Arts as She Creates Births, which Nature is Animate matter and motion.

CHAP. X.

Of Fortune.

MAtter, Figure, and Motion are the Gods that create Fortune, for Fortune is nothing in it ſelf, but Various motions gathered or drawn to a Point, which Point Man onely thinks it fix'd upon him, but he is deceived, for it fixes upon all other Things; for if any thing comes, and rubs off the Bark of a Tree, or breaks the Tree, it is a Miſfortune to that Tree; and if a Houſe be built in ſuch a place, as to ſhelter a Tree from great Storms, or Cold weather, it were Good fortune to that Tree; and if a Beaſt or Bird be hurt, it is a Miſfortune to that Beaſt or Bird; and when a Beaſt or Bird is brought up for Pleaſure or Delight, and not to Work, or be Impriſon'd, it is a Good fortune to that Beaſt or Bird; But, as I ſaid before, Fortune is onely Various motions drawn to a Point, and that Point that comes from Croſs motions, we call Bad fortune, and thoſe that come from Sympathetical

thetical motions, we call Good fortune; and there muſt needs be Antipathetical motions as well as Sympathetical motions, ſince Motions are ſo various. But Man, and for all that I know all other things, are govern'd by Outward objects, they Rule, and we Obey; for we do not Rule, and they Obey, but every thing is led like Dogs in a ſtring by a ſtronger Power; but the outward Power being inviſible, makes us think we ſet the Rules, and not the outward Cauſes; ſo that we are govern'd by that, Which is without us, not that which is Within us, for Man hath no power over himſelf.

CHAP. XI.

Of Chance.

CHances are Viſible Effects from Hidden Cauſes, and Fortune a ſufficient Cauſe to produce ſuch an Effect, for the conjunction of many Sufficient Cauſes produces ſuch an Effect, which Effect could not be produced, did it want any of theſe Sufficient Cauſes, by reaſon all theſe ſeveral Cauſes joyn'd into one, were but ſufficient to produce that one Effect, and then that one Effect makes or cauſes other Effects upon ſeveral Creatures; like as the Sun's Rays, that ſpread into ſeveral Streams or Lines upon ſeveral Creatures, and work ſeveral Effects from one Effect, as from the Effect of Heat, as that the Heat of the Sun ſcorches and burns

ſome Creatures, and with the ſame Heat onely warms and comforts other Creatures, the like one Effect advances one Creature, and caſts down others, kills ſome Creatures, and cures other Creatures, deſtroys ſome Creatures, and erects other Creatures; and when the Cauſes varie, and the Effects alter, it is named Chance.

CHAP. XII.

The Reſtleſneſs of Creatures.

THe reaſon why the Body or Mind of all Creatures, eſpecially Men, is never at Reſt, but in a perpetual Motion, is, that Motion, the Creature of all Creatures, is Reſtleſs; this is the cauſe of Endleſs Deſires, Inſatiable Appetites, Divers Paſſions, Several Humours, Pains, Sickneſs, Accidents, Fortunes, Decays, Subtractions, Diſſolutions, and the like; as alſo Creation, Infancy, Grouth, Experience, Knowledge, Induſtry, and numbers the like.

CHAP. XIII.

Of Time and Nature.

NO queſtion but there is a Time in Nature, for Time is the Variation of Nature, and Nature is a Producing Motion, a Multiplying Figure, an Endleſs Meaſure, an Unmeaſurable Subſtance, an Individable Matter.

CHAP.

CHAP. XIV.

A Sympathetical Agreement and Indeavours between the Rational and Senſitive Motions in one Creature, for Safety and Defence.

THere is a ſtrong Sympathetical Agreement, and Natural Unity between the Rational and Senſitive matter and motions in one and the ſame Figure and Creature, not only for the Figures or Creatures Conſiſtence, Maintenance, Uſe, Eaſe, Pleaſure, and Delight, but for the Guard, Safety, and Defence; as for Example, when as one Creature or Figure aſſaults each other, all the Powers, Faculties, Proprieties, Ingenuities, Agilities, Proportions, and Parts, ſtrive to defend themſelves from Hurt or Diſſolution; the Rational adviſes, the Senſitive acts; ſome times the Advantage lies in the Shape of the Creatures, ſome times in the Strength, ſome times in the Agility, and ſome times in the Advice; ſome times the Shape hath advantage over the Strength, and ſome times the Agility over both, and ſome times the Advice over all, and ſome times ſome Kind or Sort of Shapes hath Power over other Kinds and Sorts of Shapes, and ſome Kind or Sorts of Strengths, and ſome Kind or Sorts of Agilities over other Kinds or Sorts of Agilities, and ſome times ſome Advices or Counſels over other Advices or Counſels,

and ſome times the Places, ſome times the Time, and ſome times the Numbers give Advantages. Thus according to Advantages or Diſadvantages is Victory gain'd or loſt, either by Numbers, as many, or ſingle Perſons, or Creatures, or Ingenuity, Agility, Shapes, Strengths, or the like. Much more may be diſcourſed of in this Chapter, but I am not willing to trouble my Readers with very long Chapters, being deſirous to give reſpite between each Chapter.

CHAP. XV.

Of the Increaſe, & Decay of Knowledge.

THe Rational and Senſitive Knowledge, which Lives in Senſitive and Rational Animate matter, which Rational and Senſitive Animate matter Lives in the Inanimate part of Infinite matter, is divided into ſeveral Parts and Parties by Self-motion; but this Self-motion by Self-diviſion cauſes a Self-ignorance in the Infiniteneſs, although not in the Particularities, like as Life and Death, as the Death of ſome Creatures cauſes the Life of other Creatures, and the Life of other Creatures the Death of ſome Creatures, which Life and Death is the Diſſolution and Creation of particular Creatures, made by Animate matter and motions; but as Self-diviſion cauſes particular as well as general Ignorance, ſo Self-compoſition or Crea-

tion

tion causes particular Knowledges, for as all several Creatures are Produced, Nourished, and Increased by each others, so is particular Knowledge both of the Sensitive and Rational by the assistance of each Part and Party. This is the cause and reason, that the Observation and Experience, and Experiment of several and particular Men in several and particular Ages, joyned as into one Man or Age, causes Strong and Long-lived Opinions, Subtil and Ingenious Inventions, Happy and Profitable Effects, and probable Conjectures, and Absolute truths of many Causes, Things, or Creatures; also the Divisions and Dissolutions, as Deaths of particular Creatures, cause obscurity of particular Knowledges of particular Causes, Things, Creatures, and Truths, so that some particular Knowledges Increase and Decrease as some particular Creatures; for though the Kinds and Sorts of Creatures, and so of Knowledge last, yet the Particulars do not; as for Example, Animal kind lasts, and the particular Sort of Mankind, or any other Sort of the Animal kind lasts, yet each Man or any other Creature dissolves from what they were; But to conclude this Chapter, Rational and Sensitive Knowledge is Produced, Created, Transmigrated, and Operated by and in several Parts and Parties; and as there may be Degrees of the Sizes of several Creatures, as from Giants to Pigmies, so there may be in several Knowledges; and as there may be Produced several Creatures from one Creature, so

several

ſeveral Knowledges from one Mind; and as there may be Produced one Creature from ſeveral Creatures, ſo one Truth from ſeveral Obſervations, and ſeveral Truths from one Obſervation; and as there may be Produced ſeveral Creatures from ſeveral Creatures, ſo ſeveral Knowledge from ſeveral Knowledges; and as ſome particular Creatures laſt longer than others, ſo ſome particular Knowledges laſt longer than others. Thus as Creatures have Diſſolutions and Creations, and degrees of Continuances and Productions, as alſo of Increaſe and Decay, ſo hath the Senſitive and Rational Knowledge, of which I could give ſo many Examples of Creation, Increaſe, Continuance, and Diſſolution, as my Book would be ſo Great as not any Man would take the pains to Read and Study it through out.

CHAP. XVI.

Objections againſt ſome Common Opinions of Incorporality.

THe Learned talk of Incorporalities to prove a thing is Nothing, that is, to be ſo much a thing as to have a Beeing, but not ſo much a thing as to have a Subſtance; but Regular reaſon denies that, as that no Subſtance can have a Beeing; but Scholars ſay Notions, Accidents, Motions, and the like, have a Beeing, but are of no Subſtance; but plain reaſon indeavours to prove,

prove that Notions, Accidents, Motions, and the like, have a Subſtance.

CHAP. XVII.

Object: Senſe doth not Judge.

SOme Opinions are, that Senſe doth not Judge, which is a Finger, which a Hand, and ſo for all the ſeveral Parts and Parties, and therefore is not Knowing: but that doth not prove, that the Senſe is not Knowing, becauſe it doth not Judge; as for Example, A Man may Know, and yet not give a Judgment, the like for Senſe; but certainly, Senſe is Knowing, not onely in Diſtinguiſhing ſeveral Objects one from another, but for Direction; 'Tis true, the Mind Deſigns, and the Senſes Execute; as for Example, A Man Deſigns in his Mind to go to ſuch or ſuch a place, the Senſes Obey the Mind in the Execution, for the Eyes direct the Feet, and the Feet carry or bear the Body, and the whole Body gives ſtrength to the Feet to bear or carry it; And to prove the Senſes have Knowledge, I ſay, the Eyes direct the whole Body, and the Feet, to go juſt to that Deſigned place, without the Minds further notice, for the Mind takes not notice of every ſtep or tread of the Feet, or the Motion of the Body, and oftimes the Mind thinks not either of the Way, or deſigned Place the Body is going to, but is buſied with other Thoughts, and yet the Senſes carry

carry the Body to the deſigned Place; I will not ſay, the Senſes do always Execute the Minds Deſigns juſtly, becauſe the Senſes will ſometimes move Irregularly, but for the moſt part they Execute Juſtly and Rightly; But as the Senſes are ſometimes apt to move Irregularly, ſo is the Mind. But, to conclude, if the Senſes were not Knowing, the Mind could not be Informed, for the Senſes are the Mind's Informers, and ſometimes Reformers, ſo that the Senſes have a Diſtinguiſhable Knowledge, if not a Judging Knowledge; But I believe, the Senſes have Judging Knowledge in and of Particulars, although not ſo general a Knowledge as the Rational, which we call the Mind; but that which obſtructs the Senſes general Knowledge, is, that the Senſitive Animate matter is incumbred with the mixture of Inanimate matter, and the Rational matter being not ſo intermix'd, is more free and general in every Creature; but yet the Rational is divided into Parts, which cauſeth an Obſcurity of Knowledge, not onely being divided into ſeveral Creatures, but in one and the ſame Creature, ſo that the Mind as well as the Body ſeem to be Finite in Parts, though Infinite in Nature; but miſtake me not, for I mean Finite, as being dividable by change of Motion, not Nature from Nature, or by change of Nature or Matter.

CHAP.

CHAP. XVIII.

Of One Object working Different Effects upon the ſeveral Senſes.

SOme Opinions are, that the Different Impreſſions from One Object be according to the Various Diſpoſitions of the ſeveral Senſes, and not the Various Figures, Motions, or Subſtance of the Object, as for an Apple, or the like Object, the Eye tells the Mind it is Green, or Yellow, or Red; the Sent, it is Mellow, or Ripe; the Taſte, it is Sweet; the Hand or Touch, it is Cold and Heavy; the Senſes thus affected ſend Meſſengers to the Fancy with the News of theſe Diſcoveries, ſo that the Fancy diſcovers every ſeveral Picture of what entred through the Doors, and diſcourſes and conſiders the Greenneſs, Ripeneſs, Sweetneſs, Coldneſs and Weightineſs, alone or Singly by it ſelf without Relation, yet none of theſe hath any Diſtinction at all, but is One and the ſame Subſtance that makes Various and Different Impreſſions; This, ſay ſome, but in my Opinion, if it were onely the ſeveral and various Impreſſions made by the Senſes, and not the Diſtinct various Qualities of the Fruit, one Apple of the ſame kind or ſort would neither have the ſame Smell, Colour, Taſte nor Touch, or Subſtance, much leſs would there be Diſtinct kinds

or ſorts, as that is a Pippin, and that a Pearmain, or the like; for put the caſe, that the Senſitive motions did move Irregularly, as oftentimes they do, is the Apple any otherwiſe than by Nature it ſhould be? No ſure, for though the Senſitive motions move Irregularly, yet the Apple is the ſame; and though the Senſes inform the Mind falſly, yet the Mind knows by the former Regular motions, that the Change is in the Senſes, not in the Fruit; but when the Senſes move Regularly, every ſeveral Senſe, and Senſitive motions in the Senſitive paſſages, informs the Mind, for each ſeveral Senſe informs the Mind according to each Senſes Propriety, of each ſeveral Quality or Parts of the Fruit, as alſo of the whole Figure of the Fruit, ſo that every ſeveral Quality, or Part, or Object of the Fruit, as Colour, Sent, Taſte, and Touch, is preſented through ſeveral Senſitive paſſages, as the Eye, Noſtrils, Mouth, and Pores in the Fleſh of the Hand, by which ſeveral Paſſages, the ſeveral Qualities or Parts of the Fruit are preſented in ſeveral Objects by the ſeveral Senſes in the ſeveral Paſſages; ſo that the ſeveral Senſes in the ſeveral Paſſages make a perfect Diviſion or Diſtinction of the ſeveral Qualities, which are the ſeveral Parts of the Fruit, and then the Mind joyns theſe ſeveral Prints of ſeveral Objects of ſeveral Parts, into the like Figure of the whole Apple, juſt as it is in it ſelf, ſo that the diſtinct parts are perfectly and ſingly divided by the Senſitive motions in the

the Senſitive paſſages, and yet not taken from the Fruit, onely make ſeveral Prints or Pictures of the ſeveral Parts; but if thoſe Parts in the Fruit were not Diſtinct & Inherent in the Fruit, their Prints or Pictures could not be made; and though the Rational matter and motion doth for the moſt part put all the ſeveral Senſitive Prints of the ſeveral Parts of the Apple, into one whole Figure of the whole Apple, yet the Rational motions may move in ſuch Prints or Figures of each Part ſeverally, as the ſeveral Senſes have preſented: 'Tis true, the Mind creates the Figure of the Apple, either in Whole or in Divided parts, as the Senſes do preſent the Object, and the Senſes preſent the Object truly as it is, unleſs the Senſitive motions and paſſages be Diſtempered and Irregular; but if we underſtand not any thing or truth of the Outward Objects by the Senſitive motions through the Senſitive paſſages, but thoſe Objects to be as the Mind will form them, and as the Senſes preſent them, then not any one Object would appear, or be received into the Mind as to preſent one and the ſame Object twice, for ſeveral Times of Repreſentations would make ſeveral Impreſſions, quite different from the Form, or Figure, or Nature of the Object, neither would Particular men receive or judge of one and the ſame Form or Figure alike, for an Apple would not ſeem an Apple to two Men, but it would ſeem an Apple to one Man, and to another Man ſome other Figure or Form no-

thing like an Apple; but Human Senſes and Reaſon perceive and know otherwiſe, that is, That an Apple is an Apple to the particular and general Senſe and Reaſon of one Man, or more Mens Senſes and Reaſon, as that neither their Senſes or Minds, if not Diſtempered, make ſuch a Figure or Creature as an Apple, and not to be any thing different from the Nature, or at leaſt as it is in its outward Form; but if the Senſitive motions in Senſitive paſſages be Irregular, then they make falſe Prints of true Objects, and the Mind at firſt Reception may be Deluded; but if the Rational motions in the Mind be Regular, they examine the Senſitive motions, and upon Examination, the Mind informs it ſelf of the Senſitive Irregularities, or at leaſt of the Senſes Miſtakes or Errors, as the Senſes and Senſitive motions may miſtake or commit Errors by Careleſneſs, or ſome Defect, as well as by Diſorder; alſo there may be ſome Defect in the Object, or that the Object Alters or Varies ſooner than the Senſe can inform it ſelf; alſo the Rational motions may move Erroniouſly, or Careleſly, as not to receive the Prints of Objects orderly; as for Example, in Meaſures, Numbers, Weights, or Figures, as when the Senſes do not give or preſent a juſt Account, either through their Weakneſs, Careleſneſs, Errors, Miſtakes, or Irregularities, or Diſorders, or that the Object Alters and Varies, then the Reaſon or Rational matter and motions argue with the Senſes, or examine the Senſes, upon which Rational Arguments

and

and Examinations, the Senſes argue and examine the Object, and then the Senſe and Reaſon do more ſtrictly inform each other; but as for ſeveral Objects, they may ſo Vary, as to Deceive both Senſe and Reaſon before Examination; as for Example, a Fired end of a ſtick, by the ſwift motion of turning round, is a round Circle of Fire, for the Round motion makes the End a Circle, for ſeveral Motions make ſeveral Figures, when without that Circular motion it is but an End or Point, and not a Circle line or compaſs, by which Motion the Senſe is not miſtaken, for the End or Point by the Round compaſſed motion is a Circle, but the Senſe is not before Examination rightly inform'd, for the Senſe takes the Exteriour motion for the Interior figure, the Object being alter'd by the Exteriour Motion, but not in the Interior Nature, or Propriety, or Figure, but upon Examination of the Object, the Senſes, and Reaſon, are rightly Informed, and the Variations eaſily Diſcovered, or Perceived, but theſe Variations cauſe falſe Informations; as for Miſtakes in the Senſes, or Mind, it is, when as the Senſes or Reaſon take or preſent one thing for an other, as one Man for an other, without any Variation or Alteration, or to miſtake Figures, or Notes, or Words, or the like, and ſo for Taſte, Touch, or the like, as for the Irregularity of the Senſes or Reaſon, is to be Sick, or Diſtracted. But to conclude this Chapter, the Senſe and Reaſon doth Inform and Reform each other, in and of the ſame

ſame Creature, and ſo ſeveral Creatures do to each other; Alſo the Senſitive motions in the Senſitive paſſages divide thoſe ſeveral Qualities in the Fruit, which in Nature is dividable; but becauſe Art cannot diſtinctly and ſingly divide or ſeparate them, as to ſeparate the Taſte, Colour, Sent, and Touch from each other, ſome deny the Separations, but Nature can do that which Art cannot do.

CHAP. XIX.

All Thoughts, and Senſes, and Objects, are Subſtances.

EVery Thing or Subſtance hath a Beeing, but to ſay Nothing, as that No Subſtance can, may, or hath a Beeing, is againſt Senſe and Reaſon, for there is not any Motion, or Notion, Thought, Imagination, or Idea, but is of a Corporeal Subſtance, as alſo the Thoughts of Colours, Sents, Sound, and the like, or the Thoughts of Nothing, or of No Subſtance, is a Subſtance; but becauſe theſe Motions and Notions, as Thoughts, are not of ſo Groſs a Subſtance as our Animal Corporal Parts are, we deny them to be a Subſtance; the like for Dividables; as for Example, the Colour, Sent, Taſte and Touch of an Apple, or the like Vegetable, becauſe a mans Senſes cannot divide them from the Whole into each Part, as to divide the Colour from the Sent, or the Sent from the Taſte,

or

or the Taſte from the Touch, ſhall we ſay in reaſon they are Undividable? no, that is only Undividable, that Nature cannot divide; but though the Senſe of man cannot divide them, as they are dividable in Nature, yet the human Senſes divide them by the way of ſeveral Prints and Pictures; the like for the Subſtance of the Mind and Thoughts, which Subſtance is purer than human Senſe and Reaſon is capable to know, for the Infinite purity cannot be exactly known or conceived in Finite Creatures, where is only Finite Knowledge, only the Finite Knowledge may gueſs or conceive there are ſuch Purities, but not perfectly Know them.

CHAP. XX.

Of Diviſible, or Dividings.

I Do not underſtand thoſe that ſay, that a whole Figure may be Divided into many ſeveral Parts, but yet thoſe Parts are not really there as in the whole Figure, untill by Diviſion they are parcelled out, and then the whole Figure, out of which they were made, ceaſes to be any longer a Whole, for then every ſeveral Part becomes a Whole, ſo that the Parts are not yet in it, that may be made of it, and that the Parts in the Whole be a bare Capacity; in truth, it is beyond my Capacity to underſtand, or at leaſt my weak Faith to believe it, for to my Capacity and Belief, the Parts are in the Whole, although undivided,

divided, and the Whole in the Parts, when divided, unleſs the Matter were Annihilated, and then there would be neither Whole nor Parts, but the Figures whole, Parts and Motions live or lie in the Subſtances, whether Divided or not Divided, and Figures and Dividables are as Infinite as Matter and Motions; neither is there any ſuch thing as Individables in Nature, but as there are Infinite Diviſions, ſo there are Infinite Compoſitions, ſo that the Infinite Compoſitions do Equalize or make an Unity with Infinite Diviſions, for one Infinite doth Counterpoiſe an other Infinite, which makes Order and Method in Infinite Nature, but Infinite Nature is beyond a Finite Capacity; But miſtake me not, for theſe ſeveral Infinite Diviſions, and Compoſitions, and Figures, and Changes of Motions, are but the ſeveral Infinite Actions in one Infinite Matter and Nature.

CHAP. XXI.

Of Notions.

THey ſay the Notions are Nothing, but I, an ignorant Woman, believe Notions to be Something, for Notions are Thoughts, and Thoughts is Animate matter, figured by Self-motions, therefore Notions of Nothing cannot be, for we cannot Think, but it hath ſome Thing, or Matter, or Subſtance, as a Ground to move on, as Meaſure, Place, Space, Number, Weight,

Weight, Parts, Figures, or the like, which are all mix'd with Subſtance, if not with ſuch Subſtance as is ſubject to the Senſes of a Man, yet of ſuch Subſtance as may be perceived by Human reaſon, but what our Human ſenſe and reaſon cannot perfectly define, we deny the Principle; but Notion is Obſcurity of perfect Figures, as when perfect Figures are not made by the Rational Animate motions from outward Objects or Senſes, but are made out of their own voluntary and intire Motions, without the help of the Senſitive prints, or elſe are made partly by the Senſitive prints, and partly by its own voluntary or ſingular Motions, or elſe that the Animate matter doth not move as in a circumferenced limited Figure, but as in a continued Line or Stream. Thus are Notions made, as for Example, when we think of Infinite, then the Rational matter and motions move as in a Line, without Period or Ends, Points or Diviſions, and when we think of Nothing, then the Rational matter moves in Dilatation without Diviſion, or perfect Prints or Figures; for the thoughts of Nothing are as Ciphres amongſt Numbers, but the Thought of Infinite Nothing and Abſence is much after one and the ſame way of Rational matter, movings or motions.

CHAP. XXII.

Of Notions, or of the Thoughts of Deafneſs, Dumneſs, Blindneſs, Lameneſs, Baldneſs, Abſence, Death, and Sin.

THeſe Thoughts are made, as all Thoughts are, of Rational ſubſtance, and partly from Senſitive figures and Objects; for Rational matter with Self-motion makes Figures of Senſitive Creatures, and ſeveral Objects, that the Senſitive Animate matter working in each Senſe preſents to the Rational, and the Rational matter and motions make thoſe Senſitive figures that have been preſented, as much, or perfect, as thoſe that are preſented; as alſo preſent and former Senſitive objects at one time, and many ſeveral Objects that were preſented at ſeveral times, which the Rational makes or moves in at one time; for the Rational Animate matter makes millions of Figures and Motions in the like Time, Place, or Space of Senſitive Creation Figures or Motion, being Purer, Agiler and Freer; As for the Thoughts of Deafneſs, Dumneſs, Blindneſs, or the like, the Rational motions make Senſitive figures, ſuch as a Man, or the like, in Rational matter, But the Organs, or Senſitive paſſages of that Figure to be Defective, or Stop'd, or to make neither Notes, Numbers, Meaſures, Lines, or Local motions, as Sound, Words, Light, and Walking,

ing, for Sight, Hearing, Speaking, or Walking; the like for Baldneſs, as to make a Figure of a Man's Head without Hair, theſe are the Thoughts or Notions of Deafneſs, Dumneſs, Blindneſs, Lameneſs and Baldneſs; as for Abſence, the Rational motions make and move Senſitive figures in Rational matter, and each Figure to be Separated from each other, as having other Figures between the Separated, as the Figures of two Men, and the Figures of Air, Water, Earth, and the like, between each other; but if they onely make Abſence, then there is no Separation or Middle-place, but is onely a Line with two Ends, or without Ends. Theſe are Thoughts or Notions of Abſence; as for the Notions and Thoughts of Death and Dead, 'tis thus, When as the Rational motions figure out an Animal figure in the Mind, without Senſitive and Local motion, this is the Thought of Dead, and when that Figure is Diſſolved, that is the Thought of Death. Thus are the Notions and Thoughts of Dead and Death. As for Sin, I know not how to define or deſcribe it, by reaſon of ſeveral Religions, and ſeveral Opinions in every ſeveral Religion; wherefore I will paſs by that, and leave it to the true Church; but ſtepping aſide from Divinity to Natural Philoſophy, my Opinion of Notions and Thoughts, are made after my former Deſcriptions; for Rational matter being a more Pure Degree of Subſtance, and Agiler motion, makes Rational Knowledge, or Thoughts,

or Notions of Senſitive figures and motions, as alſo Figures, as Thoughts or Notions, without Senſitive patterns, for the Rational matter and motions make many Notions, like as Imaginations, that is to move in Figures, not made by the Senſitive Prints, but after a more freer manner, not bound to Senſitive prints or objects, but of its own choice; alſo the Rational motions make Figures of Senſitive objects, without the Senſitive patterns, as when we remember what we have Heard, Seen, Taſted, Touched, Smell'd, and the like, then the Rational motions work by Rote: But I ſhall Treat more of this in other Chapters in my Book.

PHI-

PHILOSOPHY.

PART IV.

CHAP. I.

Of Matter, Motion, and Figure.

AS I ſaid before in the Firſt Part of my Book, that there is no Firſt matter, nor no Firſt motion, becauſe Eternal and Infinite, yet there could be no Motion without Matter, for Matter is the Cauſe, Motion but the Effect of Matter, for there could be no Motion unleſs there were Matter to be moved; but there might be Matter and Figure without Motion, as an Infinite and Eternal dull Lump, for I ſee no reaſon but Infinite might be without running Forward, or Circle-wayes, if there were not ſeveral Degrees of the Only matter, wherein Motion is an Infinite Eternal effect of ſuch a Degree. Neither is it Non-ſenſe to ſay, Figure is the effect of Matter; for though there is no Matter without Figure,

gure, yet there could be no Figure without Matter, wherefore Matter is the prime cauſe of Figure, but not Figure of Matter, for Figure doth not make Matter, but Matter Figure, no more than the Creature can make the Creator, but a Creature may make a Figure. Thus although there is no Firſt matter, yet Matter is the firſt cauſe of Motion and Figure, and all Effects, although they are as Infinite and Eternal as Matter it ſelf; and when I ſay Matter prime, I ſpeak for Diſtinctions ſake, which is the Only matter. The Animate matter is the Soul of Nature; The Inanimate part of Matter, the Body; The Infinite figures are the Infinite Forms of Nature, and the ſeveral Motions are the ſeveral Actions of Nature.

CHAP. II.

Of Cauſes and Effects.

AS I have ſaid before, the Effects are Infinite and Eternal as the Cauſes, becauſe all Effects lie in Matter and Motion, indeed in Matter only, for Motion is but the Effect of Matter; Wherefore, all particular Figures, although Diſſolvable, yet are inherent in the Matter and Motion; as for Example, if a Man can draw the Picture of a man, or any thing elſe, although he never draws it, yet the Art is inherent in the Man, and the Picture in the Art, as long as the Man Lives; ſo as long as there is Matter and Motion,

Motion, which was from all Eternity, and ſhall be Eternally, the Effect will be ſo.

CHAP. III.

Whether Motion be a Thing, or Nothing, or can be Annihilated.

SOme have Opinion, that Motion is Nothing, but to my reaſon it is a Thing, for if Matter is a Subſtance, a Subſtance is a Thing, and the Motion and Matter being inſeparably United, makes it but one Thing; For as there could be no Motion without ſuch a Degree or Extract of Matter, ſo there could be no ſuch Degree or Extract of Matter without Motion, thus Motion is a Thing. But by reaſon particular Motions leave moving in ſuch Matters and Figures, ſhall we ſay they are Deceaſed, Dead, or become Nothing? But ſay ſome, Motions are Accidents, and Accidents are Nothing, but I ſay all Accidents Live in Subſtance, as all Effects in the Cauſes; Say ſome, when a man for Example ſhakes his Hand, and when he leaves ſhaking, whither is that Motion gone? ſay others, no where, for that particular Motion ceaſeth to be, ſay they. I anſwer, that my reaſon tells me, it is neither fled away, nor ceaſed to be, for it remains in the Hand, and in that Matter that Created the Hand, that is, in that and the like Animate matter that is in the Hand. But ſome will ſay, the Hand never moves ſo again, but I ſay the

the Motion is nevertheleſs there; they may as well ſay, when they have ſeen a Cheſt full of Gold, or the like, and when their Eyes are ſhut, or that they never ſee it more, that the Gold doth not lie in the Cheſt, although the Gold may lie there Eternally, or if they ſhould ſee it again, ſay it is not the ſame Gold: So likewiſe particular Motions are but Shewed, not Loſt, or Annihilated; or ſay one ſhould handle a Veſſel often, that every time you handle the Veſſel, it is not the ſame Touch, Veſſel, or Hand, and if you never touch the Veſſel again, that the Hand, Veſſel, or Touch is Annihilated. But particular Motion, as the Veſſel or Hand, is but Diſuſed, not Annihilated, for particular Motions can be no more Annihilated than particular Figures that are Diſſolved, and how in reaſon can we ſay particular Figures are Annihilated, when every Part and Parcel, Grain and Atom remains in Infinite matter? but ſome will ſay, when a Houſe, for Example, is pull'd down, by taking aſunder the materials, that very Figure of that Houſe is Annihilated; but my Opinion is, that it is not, for that very Figure of that Houſe remains in thoſe materials, and ſhall do Eternally, although thoſe materials were Diſſolved into Atoms, and every Atom in a ſeveral Place, Part, or Figure; and though Infinite figures ſhould be made by thoſe materials, by ſeveral Diſſolutions and Creations, yet thoſe Infinites would remain in thoſe particular materials Eternally, and were there from all Eternity; and if any of thoſe Figures

gures be re-built or created again, it is the ſame Figure it was. So likewiſe the Motion of the Hand, which I ſaid; for Example, if the ſame Hand moves after the ſame manner, it is the ſame Motion that moved the Hand before; ſo it may make Infinite Repetitions. Thus one and the ſame Motion may move Eternally, and Reſt from moving, and yet have a Beeing. Some are of an opinion, that Fire is onely a Motion; 'Tis true, Fire, as all other Creatures, are made by Motion, but Fire cannot be a Motion without Matter, for Motion cannot act without Matter, no more then Matter can move without Motion; but Motion and Matter are inſeparable, for though Matter may be without Motion, yet Motion cannot be without Matter; but ſome Men obſerving that Change of motion upon one and the ſame Matter makes ſeveral Figures or Forms, believe that thoſe Figures or Forms are onely Motion without Matter.

CHAP. IV.

Of Motions.

THere are millions of ſeveral Motions, which agree to the making of each Figure, and millions of Several motions are knit together, for the General motion of that Figure, as if every Figure had a Common-wealth of ſeveral Motions, working to the ſubſiſtence of the Figure; and ſeveral ſorts of Motions, like ſeve-

ral ſorts of Trades, hold up each other; ſome as Magiſtrates and Rulers, others as Train-bands, as Soldiers; ſome make Forts, and dig Trenches; ſome as Merchants that Traffiick; ſome as Seamen and Ship-maſters; ſome that labour and work, as, ſome Cut and Carve, others Paint and Ingrave, ſome Mix and Temper, Joyn and Inlay, and Glue together; ſome Form and Build; ſome Caſt in Mold, and ſome make Molds to Caſt; ſome work Rough caſts, ſome Poliſh and Refine, ſome bear Burthens, ſome take off Burthens, ſome Dig, ſome Sow, ſome Plough, ſome Set, ſome Graft, ſome Plant, ſome Gather, ſome Reap, ſome Sift, ſome Thraſh, ſome Grind, ſome Knead, ſome Bake, ſome Beat, ſome Spin, ſome Weave, ſome Sew together, ſome Winde and Twiſt, ſome create Arts, and others diſſolve Arts, and millions of millions of External motions; but as we ſee External, ſo we may imagine are Internal motions; but the Obſcure motions certainly are more Various, and Subtiler, and Agiler.

CHAP. V.

Many Motions go to the Producing of one Thing, or to one End.

THere are millions of Several motions go to the making of one Figure, or in mixing, as I may ſay, of ſeveral Degrees of the Inanimate part of Matter, as I will give one for Example in

in Groſs External motions, where I will deſcribe it by Diſgeſtive motions, which is to fit Parts, and to diſtribute Parts to ſeveral Places proper to the Work; For Diſgeſtive motions, there are many ſeveral Sorts or Kinds of Motions mixt together, as for Example, a piece of Meat is to be boiled, or the like, ſome Motions cut Fuel, and others take it up, others carry, others lay it down in a Chimney, or the like place, others put fire, others kindle it and make it burn, others take Metall and melt it, others caſt ſuch a Figure as a Pot, others bring the Pot, others ſet it over the fire, others take up Water, others carry that Water to the Pot, others put that Water into the Pot, others kill a Sheep, others divide it into parts, others put a part into the Pot. Thus a piece of Meat cannot be boiled without all theſe Motions, and many more, which would be too tedious to relate, for I could have inlarged it ten times as much, onely in boyling a piece of Meat, and if there be ſo many ſeveral Motions in our Groſs Senſe in ſuch things as theſe, then what is there in Infinite Nature? Yet for all theſe Infinite Varieties of Motions, as I ſaid before, I cannot perceive but ſix Ground-motions, or Fundamental motions, from whence all Changes come, which are theſe, Attractive motions, Contracting motions, Retentive motions, Dilative motions, Digeſtive motions, and Expulſive motions; likewiſe, although there be Infinite Kinds, and different Figures, yet the Ground-work from

whence ariſes all the Variety, is but from theſe Figures, as Circular, Triangular, Cube, and Parallels, High, Low, Narrow, Broad, Thick, Thin; And as there are Infinite changes of Motions in the Senſitive Animate matter, working on the Inanimate Parts of matter, ſo there are Infinite changes of Motions in the Rational Animate matter, making Infinite kinds of Knowledge, and Degrees of Knowledge and Underſtanding; and as there are Infinite changes of Motion, ſo there are Infinite effects, and every Produced effect, is a Producing effect, which Effect produces Effects, and the Only matter is the cauſe of all Effects, for the ſeveral Degrees of Only matter is the Effect of Only matter, and Motion is the Effect of ſome ſorts of the Degrees of Only matter, and Varieties are the Effects of Matter and Motion, and Life is the Effect of Animate matter, and Knowledge the Effect of Life.

CHAP. VI.

Of the ſix Principal Motions.

AS I have ſaid, there are Infinite Contractions, Attractions, Retentions, Dilatations, Digeſtions, and Expulſions; and to explain my Self to my Readers as well as I can, unleſs they ſhould miſtake me, I will here deſcribe, although after a Groſs way, yet according to my Capacity, a few of the Infinite variety of Motions:

ons: Firſt, there are ſix Principal Motions, from whence Infinite Changes are made or Produced, as from Contractions, Attractions, Retentions; theſe three Principal Motions do in ſome kind Sympathize to each other, and Dilatations and Expulſions do alſo Sympathize to each other, but Digeſtion is a Mixt motion taking part of all, but I divide them into ſix parts for Diſtinction. Now to treat of them ſeverally, we muſt make an imaginary Circumference and Centre. Then firſt for Attractions, which is to draw Parts to Parts, or to draw Parts from Parts, or to draw ſeveral Parts together; yet Attractions draw not after one and the ſame way or manner of way, but after divers manner and ſeveral Faſhions, Forms, and Biaſſes, and ſeveral Motions; In thoſe Motions ſome are Slow, ſome Quick, ſome Croſs, ſome Even. Again, ſometimes Attractive motions draw, as if one ſhould pull in a Line, or draw in a Net, ſome Slope-wayes, ſome Straight-wayes, ſome Square-wayes, ſome Round-wayes, and millions of the like Varieties in this ſort of Motion, yet all Attracting motion. Secondly, Contracting Motions, which move after an other manner; for though both theſe ſorts of Motions are to bring Parts together, yet Contraction tends more towards a Point, and ſtrives, me-thinks, more againſt Vacuum, than Attraction, gathering all into a firm Body, ſtopping up all porous Paſſages, ſhutting out Space, and gathering in Matter as cloſe as it can; Indeed, Attractions are but in the way to Con-

Contractions, as Dilatations to Expulſions; but this ſort of Motions is Surfling, Pleating, Folding, Binding, Knitting, Twiſting, Griping, Preſſing, Tying, and many the like, and after ſeveral manners or faſhions. Thirdly, Retention is to hold or to ſtay from Wandring, to Fix, as I may ſay, the Matter to one place, as if one ſhould Rivet, Stick, or Glew Parts together. Fourthly, Dilatations are to inlarge, as to ſpread or extend, ſtriving for Space or Compaſs; it is an Incroaching motion, which will extend its bounds as far as it can; this ſort of Motion is Melting, Flowing, Streaming, Spreading, Smoothing, Stretching, and millions of the like. Fifthly, Expulſive is a Motion that ſhuns all Unity, it ſtrives againſt Solidity and Uniformity, it diſperſes every thing it hath Power on; this ſort of Motion is Breaking, Diſſolving, and Diſperſing Parts from Parts. Sixthly, Digeſtive motions are the Creating motions, carrying about Parts to Parts, and fitting and matching and joyning Parts together, mixing and tempering the Matter for proper uſes; but in every Kind and Sort of Motions there are divers Manners and Changes.

CHAP.

CHAP. VII.

Of Double Motions at one and the ſame Time, on the ſame Matter.

AS there are ſeveral Changes in particular Motions, ſo there are Double motions; as for Example, Spinning Flax or the like, is drawn long and ſmall, twiſted hard and round, and at one time. Again, a Bowl runs round-way, and yet ſtraight out at one time. A Shuttle-cock ſpins about in a ſtraight Line. The Wind ſpreads, and yet Blows ſtraight out at one and the ſame time. Flame aſcends Circular, and many the like Examples may be given; as alſo the Intermixing motions, and ſome Motions are partly of one Sort, and partly of other Sorts of Motions.

CHAP. VIII.

Of ſeveral Strengths.

ALthough there be Infinite Strengths of Motion, yet not to all ſorts of Figures, nor to all degrees of Matter, for ſome Figures move ſlow, others move ſwift, according to the nature of the Shape, or the interiour Strength, or the degree or quantity of Animate matter that Created them, as the Animate Mind, and the Animate Body, which we call Senſe and Reaſon,

ſon, which Senſe and Reaſon may be in every thing, though after different manners, but we have confined Senſe onely to Animal kind, and Reaſon onely to Mankind; but if the Animate matter is in the Inanimate part of Matter, as the Life in the Body, then there is no part that hath not Senſe and Reaſon, whether Creating or Created, Diſſolving or Diſſolved, though I will not ſay that every Creature enjoys Life or Knowledge alike, yet every Figure is Animated, for it is Animate matter that Creates and Diſſolves Figures, yet the Animate matter works according to the ſeveral Tempers of the Inanimate part of matter, and to ſuch Proprieties and Figures, and Figures Proprieties, and proper Figures, that is, Motion doth form the Onely matter into Figures, yet Motion cannot alter the Entity of Onely matter, but Motion can and doth alter the Interior and Exterior Figures, and though the ſeveral Degrees of Matter may be placed and re-placed in Figures, yet the Nature of the Matter cannot be altered.

CHAP. IX.

Of the Agility of Animate Matter.

ANimate matter ſeems much nimbler in ſome works than in others, as making Elements, and their ſeveral Changes, being more Porous than Animals, Vegetables and Minerals, which are more contracted, and not ſo eaſily

easily metamorphosed; and on the Thin part of Inanimate matter they seem much Nimbler and Agiler, than when they work on the Gross part of Inanimate matter, for though the Animate matter can work but according to the strength, yet not always according to that strength, for their burthens are not always equal to their strength; for we see in Light, Thin, Inanimate matter, their Motions to be more Swift, having less Incumbrances, and lighter Burthens, unless it be opposed and stopped by the Animate matter that works in the more Solid or Thicker part of Inanimate matter, or moves Solid and United Figures; yet many times the Animate matter that works on the Thin part of Inanimate matter, or in more Porous Figures, will make way through Solid and Thick Bodies, and have the power on those that work on more Gross matter; for the Animate matter, that works on Gross matter, cannot resist so well, having greater Burthens, nor act with that Facility as the others can, whose Matter is Lighter, or Figures more Porous; for we see many times Water to pass through great Rocks and Mountains, peircing and dividing their Strengths by the frequent Assaults thereon, or to; yet many times the Pass is kept or lost, according to the Quantity of the Animate matter of either side.

CHAP. X.

Of Repeating one and the ſame Work, and of Varieties.

NAture may Repeat one and the ſame Creature if ſhe pleaſes, that is, the ſame Motions on the ſame Matter may Create the ſame Creature, by reaſon the ſame Motions and the ſame Matter is Eternally in the Body Infinite; Thus the Original Cauſe of producing one and the ſame is Eternal, by reaſon nothing in Nature can be annihilated, and though the Infinite matter is but one and the ſame, yet the Infinite part of Animate matter moves Infinite ſeveral ways, and by reaſon of the Diverſity of Motion there is ſuch Variety, as ſeldom any two Creatures are alike, for Motion delights in Variety, not ſo much in the different Kinds, as in the particular Creatures, which makes me think, that Motion is bound by the Nature of the Matter, to make ſuch Kinds, although it be at liberty for Particulars; and yet the ſeveral Kinds may be as Infinite as the Particulars; as for Example, although Motion is bound to Animal kind, Vegetable kind, Mineral kind, and alſo to make ſuch kinds of Worlds as this, is, yet Motion may make Infinite particular Worlds, as Infinite particular Animals, Vegetables, Minerals, and thoſe Infinite Worlds may differ as thoſe Kinds of Creatures; for Worlds may differ from other

other Worlds, not onely as Man from Man, but as Man from Beaſt, Beaſts from Birds, Birds from Fiſh, and ſo as Vegetables do; for an Oak is not like a Tulip or Roſe, for Trees are not like Flowers, nor Flowers like Roots, nor Roots like Fruit, nor all Flowers alike, nor all Roots alike, nor all Fruits alike, nor all Trees, and the reſt; and ſo for Minerals, Gold is not like Lead, nor a Diamond like a Pibble-ſtone; ſo there may be Infinite Worlds, and Infinite variety of Worlds, and be all of that kind we call Worlds, yet be nothing alike, but as different as if it were of another Kind, and may be Infinite ſeveral Kinds of Creatures, as ſeveral Sorts that we can never imagine, nor gueſs at; for we can gueſs or imagine at no other ways, but what our Senſes brought in, or our Imaginations raiſed up, and though Imaginations may in nature be Infinite, and move in every particular Brain after an Infinite manner, yet it is but Finite in every Particular figure, becauſe every Particular figure is Finite, that is, every Particular figure comes by Degrees from Creation to a full Growth, from a full Growth to a Decay, from a Decay to a Diſſolution, but not Annihilation, for every Particular figure lies in the Body Infinite, as well as every particular Kind; for unleſs Eternal and Infinite matter, and Eternal and Infinite motions could be annihilated, Infinite figures will Eternally remain, although not in their Whole bulk, yet in their Parted pieces or Parts; for though one and the ſame Matter may

be made into other Figures, yet the former Figures have as much a Beeing as the preſent Figures, by reaſon the Matter that was the cauſe of theſe Figures hath an Eternal Beeing, and as long as the Cauſe laſts, the Effects cannot be Annihilated.

CHAP. XI.

Of Creation, and Diſſolving of Nature.

THe Diviſions and Subtractions, Joyning and Creations are not alike, nor do they Continue and Diſſolve with the like meaſures of time, for ſome Vegetables are Old and Decrepit at a Day old, others are but in their Prime after a Hundred years, and ſo ſome Animals, as Flies and the like, are Old and Decrepit at a Year old, others, as a Man, is but at his Prime at Twenty years, and will Live a Hundred years, if he be Healthy and Sound; ſo in the Minerals, perchance Lead, or Tin, or the like, is but as a Flie for continuance to Gold, or like a Flower to an Oak; then it is probable, that the Sun and the reſt of the Planets, Stars, and millions more that we know not, may be at their full Strength at ten hundred thouſand years, nay, million of millions of years, which is nothing to Eternity, or perchance, as it is likely, other Figures were at full Strength, when Matter and Motion Created them, and ſhall laſt untill Matter Diſſolves them. Again, it is to be obſerved, that

that all Spherical Figures laſt longeſt, I think it is, becauſe that Figure hath no Ends to ravel out at. Some ſay, that Gold is not to be altered from the Figure that makes it Gold, becauſe Chymiſts have tried, and cannot do it; but certainly, that innated Motion, that joyns thoſe Parts, and ſo made it in the Figure of a Mineral, can diſſolve thoſe Parts, and make it into ſome Figure elſe, to expreſs an other Thing; but being a more Solid Part of Inanimate matter, than that which makes other Minerals, it is longer a Creating and Diſſolving than the other Figures are, that are of a Light or Softer ſubſtance, and may be, the Motions that make Gold, are of Slower nature, ſo as it is cauſed from the Hardneſs of the Matter, or the Slowneſs of the Motion cauſed by the Curioſity of the Work, wherein they muſt uſe more different Motions than in other Figures, ſo as it may be a thouſand years Uniting, or a thouſand years a Diſperſing, a thouſand, nay, ten thouſand; for there is no Account, nor time in Nature Infinite, and becauſe we laſt not ſo long as to perceive it, ſhall we ſay that Gold was Eternal, and ſhall laſt Eternally? So we may as well ſay of an Oak, that is an Hundred years ere it comes to full Maturity, and an Hundred years ere it comes to be Diſſolved, that it was an Oak Eternally, and ſhall be ſo Eternally, becauſe a Flower is Created, and Diſſolved in two or three dayes; but the Solidity of the Matter, and the Curioſity in the ſeveral Changes and Enterchanges of Motions prolong

prolong the Work, yet it is haſtened, or retarded by the Quantity or Strength of Animate matter and motions that Work therein; for when there is more, it is Sooner Formed, when leſs, Longer ere it come to its figurative Perfection.

CHAP. XII.

Of Sympathies and Antipathies, which is to Agree or Diſagree, to Joyn or to Croſs.

THere are Infinite ſorts of Figures or Creatures that have Sympathy, and Infinite ſorts of Figures that have Antipathies, both by their Exterior and Interior motions, and ſome Exterior Sympathy with ſome Interior, and ſome Interior with ſome Exteriors, and ſome Exterior with Exteriors, and Interior with Interiors, both in one and the ſame Figure, and with one and the ſame Kind, and with different Kinds, and with ſeveral Sorts, which works Various Effects; as in Animals and Vegetables, ſome Vegetables will ſo much Antipathize with ſome Animals, as to cauſe a Deſtruction, and ſome Vegetables do ſo Sympathize to Animals, as the Animals could not ſubſiſt without their Aſſiſtance.

CHAP.

CHAP. XIII.

There is no Supreme Knowledge.

THe Infinite matter being Divided by Self-motion into Parts, cannot know it Self, nor no Part doth abſolutely know it Self, for Knowledge Lives in Parts, and there are as many ſeveral degrees of Knowledge as of Animate matter, which is Infinite, and therefore not Abſolute, and as much Variety of Knowledge, as there is of Motions; and though all Animate matter is Knowing, yet all Animate matter is not Known, this makes Figures to have of each others a Suppoſitive, but not an Abſolute Knowledge; Thus Infinite makes Animate matter in ſome kind a ſtranger to it Self, yet being Knowing, although not Known, it makes an Acquaintance with Parts of it Self, and being Various by Interchanging motions, it alſo loſeth Acquaintance; the Acquaintance we call Learning, Invention, Experience, or Memory; the Unknown, or not Acquainted, we call Stupidity, Ignorance, Forgetfulneſs, Illiterate; but by the Acquaintance of Experience, we come to find the Uſe of many things, and by the Uſe we come to Learn, and from our Learning we come to Practiſe, and by our Practice we come to produce many Effects from the hidden and myſtical Cauſes, which are the Effects from the Only cauſe, which is the Only matter; Thus we come

to

to find the uſe of Earth, Water, Air, and Fire, Vegetables, Minerals, and ſo Animal with Animal; and we do not onely get new Acquaintance, which is new Experience, but we make uſe of our Acquaintance to our own Benefit, or at leaſt we ſtrive to do ſo; for it is the nature of Life, which Life is Animate matter, to ſtrive for Preheminence and Abſolute Power, that is, Onely matter would Rule it ſelf, but being Infinite, it neither Abſolutely Knows it ſelf, nor can Abſolutely Rule or Govern it ſelf, and though it be an Endleſs Work, yet Motion, which is the Moving part of Nature, cannot deſiſt, becauſe it is Infinite and Eternal; Thus Moving matter running perpetually towards Abſolute Power, makes a perpetual War; for Infinite and Onely matter is always at ſtrife for Abſolute Power, for Matter would have Power over Infinite, and Infinite would have Power over Matter, and Eternity would have Power over both. Thus Infinite and Eternal matter, joyned all as to one, is always at ſtrife in it ſelf, yet the War is Regular, not Confuſed; for there is a Natural Order and Diſcipline in Infinite Nature, as much as cruel Tyranny; for there is a Natural Order and Diſcipline oftentimes in cruel Tyranny; But as for Sympathies amongſt Mankind, it cauſes Community, Aſſociations, Commerces and Government; and Antipathy cauſes Diviſions, Wars, and Deſtruction.

CHAP.

CHAP. XIV.

Of Different Knowledge in Different Figures.

CErtainly there are infinite ſeveral Kinds, as well as infinite ſeveral Sorts, and particular Creatures in Nature; and certainly in every ſeveral Kind, nay, every ſeveral Sort in every Kind, Knowledge works after a Different manner in every Different Figure, which Different manners we call Particular knowledges, which work according to the Figure, ſo Infinite knowledge lies in Infinite figure, and Infinite figure in Infinite matter; and as there are Infinite degrees of Matter, ſo there are Infinite degrees of Knowledge; and as there are Infinite degrees of Knowledge, ſo there are Infinite degrees of Motions; and as there are Infinite degrees of Motions, ſo there are Infinite degrees of Figures; and as there are Infinite degrees, ſo there are Infinite kinds; and as there are Infinite kinds, ſo there are Infinite ſorts, and ſo Infinite particulars in every Sort; yet no Kind can be ſaid to have Moſt or Leaſt, though Leſs or More, for there is no ſuch thing as Moſt or Leaſt in Nature, for, as I ſaid before, there is onely Different knowledge belonging to every Kind, as to Animal kind, Vegetable kind, Mineral kind, and infinite more which we are not capable to know, but two particular Sorts in every Kind; as for Example, Man may have

a different Knowledge from Beasts, Birds, Fish, Worms, and the like, and yet to be no Wiser or Knowing than they; for Different ways in Knowledge make not Knowledge more or less, no more than Different Paths inlarge one Compass of Ground, nor no more than several Words for one and the same Thing, for the Thing is the same, onely the Words differ; so if a Man hath Different knowledge from a Fish, yet the Fish may be as Knowing as Man, but Man hath not a Fishe's Knowledge, nor a Fish a Man's Knowledge. Likewise some Creatures may have more and some less Knowledge than others, yet none can be said to have Most or Least, for there is no such thing as Most or Least in Nature; nor doth the Weakness or Imperfection in particular Creatures impair the Knowledge of the Kind, or impair the Knowledge, as I may say, belonging to any particular Sort, nor can any one have such a Supremacy of Knowledge, as to add to the Knowledge of the Kind, or Sort of kind, as to have such a Knowledge as is above the Capacity of that Kind or Sort to understand. As for Example, A Man to know more than the Nature of Man is to know, for what Knowledge Man hath had, or can have, is in the Capacity of the Kind, though not to every Particular man; for though Nature may work Within her self, yet she cannot work Beyond her self, and if there be Mix'd Sorts of Creatures, as, partly Man and partly Beast, partly Man and partly Fish, or partly Beast and partly

partly Fiſh, and partly Fiſh and partly Foul; yet although they are Mix'd Creatures, and may have Mix'd knowledges, yet they are Particular ſorts, and Different knowledges belonging to thoſe Sorts; and though Different ſorts have Different knowledges, yet the Kind may be of one and the ſame Degree, that is, every ſeveral Sort of Creatures, in one and the Same kind, is as Knowing and as Wiſe as another, and that which makes ſome Creatures ſeem leſs Perfect than others, or more Knowing than others, is the Advantage or Diſadvantage of their Shape, which gives one Creature Power over another, but Different knowledge in Different Creatures takes advantages by turns according as it turns to it. And as there is Different knowledge, and Different kinds, and Several ſorts, ſo there is Different knowledge in Different Senſes in one and the ſame Creature; for what Man hath ſeen the Interior Biting motion of Cold, and Burning motions of Heat? yet feels them; we imagine by the Touch the Interior nature of Fire to be compoſed of Sharp Points, yet our Sight hath no knowledge thereof; ſo our Sight hath the knowledge of Light, but the reſt of our Senſes are utterly ignorant thereof; our Ears have the knowledge of Sound, but our Eyes are ignorant of the knowledge thereof; thus, though our Ears may be as Knowing as our Eyes, and our Eyes as Knowing as our Ears, yet they may be ignorant of each other; I ſay Knowledge, for Senſe is Know-

ledge as well as Reaſon, onely Reaſon is a Degree above Senſe, & Senſe a Degree beneath Reaſon.

CHAP. XV.

The Advantages of ſome Figures, & ſome Degrees of Matter and Motions over Others.

IF we do but ſtrictly prie into the Works of Nature, we ſhall obſerve, that all Internal motions are much after the manner of External motions, I mean thoſe Motions that we can perceive by thoſe Effects that are ſubject to our Senſes; and although for the moſt part the Strongeſt motions govern the Weakeſt, yet it is not always found that they Conquer the Weaker, for there are Infinite Slights, or Infinite Advantages to be taken or miſt in Infinite Nature, ſome by the Shapes of their Figures, and ſome in the Degrees of Matter, and ſome in the Manner of Moving; for Slights are juſt like the Actions of Juglers, Vaulters, Tumblers, Wreſtlers, or the like; for Shapes, I will give one or two for Example, as a little Mouſe, which is but a weak Creature in compariſon to an Elephant, yet the ſmall Mouſe ſhall overcome the Elephant by running up through the Snout, and ſo get into the Head, and ſo gnaw on his Brain; and a Worm is a weak Creature in compariſon of a Man, yet if he get into the Guts, it will gnaw out his Bowels, and deſtroy that Figure.

So

So for degrees of Matter, what advantage hath the Animate matter, or the Inanimate part of matter? and for Motions, moſt often the Nimbler and Agil motions get an advantage on the Stronger, if more Slow: and oftner by Manner of Motions, for many times a Diving motion will have the better of a Swimming motion, a Jumping motion of a Running motion, a Creeping or Crawling motion of either, a Darting motion of a Flying motion, a Croſs motion of a Straight motion, a Turning motion of a Lifting motion, ſo an Attractive motion of an Expulſive motion, and Infinite the like, and every Motion may have their advantages by Turns, and then the advantages of Place, and of Times, as I may call it for Diſtinctions ſake, ſome Creatures will ſuppreſs other Creatures in the Night, when the Suppreſſors dare not appear to the Suppreſſed in the Light; a great Army ſhall be Deſtroyed by a little Army, by ſtanding in a Lower patch of Ground, or by Fighting at ſuch a time of the day when the Sun Shines on their Faces; but it would be too long for *Methuſalems* Life to ſet down Examples, being Infinite; but this ſhall ſerve to expreſs my Opinions.

CHAP.

CHAP. XVI.

Of Figures in Figures.

MOst Figures are Lined and Interlined, as I may ſay, for Expreſſions ſake, ſome Figures are like a Set or Neſt of Boxes, as for Example, half a dozen Boxes one within an other; ſo every of thoſe Figures hath the ſame Figure within one an other, the Uttermoſt Figure being the Largeſt, the Inmoſt Figure the Leaſt; as for Example, a Man builds a Houſe, firſt he builds the Figure of that Houſe with Wood, as Beams, and Rafters, and Laths; next he lays Morter, then is the Figure of that Houſe in Morter, then he lays Bricks or Stones, then there is the Figure of the Houſe in Stone and Brick, then it is Plaiſtered within in the inſide, then there is the Figure of the Houſe in Plaiſter, if it be Painted, then there is the Figure of the Houſe in Painting; So likewiſe in Animal, as a Man, firſt there is the Figure of a man in Bones, as we may ſee in an Anatomy, then there is the Figure of a man in Fleſh, thirdly, there is the Figure of a man in the Skin; then there are many different Figures belonging to one and the ſame Figure, as every ſeveral Part of an Animal is of a different Figure, and every Part hath different Figures belonging thereunto; as Man for Example, to the Hand there is the Palm, the Back, the Fingers, the Nails, yet all makes

makes but one Hand. So the Head, there is the Brain, the *Pia mater*, the *Dura mater*, the Scul, the Noſe, the Eyes, the Fore-head, the Ears, the Mouth, the Lips, the Tongue, the Chin, yet all this is but a Head; Likewiſe the Head, the Neck, the Breaſt, the Arms, the Hands, the Back, the Hips, the Bowels, the Thighs, the Legs, the Feet, beſides the Bones, the Nerves, the Muſcles, the Veins, the Arteries, the Heart, the Liver, the Lights, the Midrif, the Bladder, the Kidnies, the Guts, the Stomack, the Brain, the Marrow, the Blood, the Fleſh, the Skin, yet all theſe Differently figured Parts make but the Figure of one Man. So for Vegetables, the Root, the Sap, the Pith, the Bole, the Bark, the Branches make but the Figure of one Tree. Likewiſe every Figure is Different, this Man is not like that Man, this Tree is not like that Tree, for ſome Trees are Larger or Leſs, Higher or Lower, more or leſs Branched, Crooked or Straighter; ſo in Animals, ſome are of one Shape, ſome of another, as Men, Some are Slender and Tall, ſome Little and Low, ſome Big and Tall, others Thick and Low, ſome High-nos'd, ſome Flat-nos'd, ſome Thick, ſome Thin Lip'd, ſome have High Fore-heads, ſome Low, ſome Broad, ſome Narrow, and numbers of like Examples may be given, not only to Man, but all other Animal Creatures according to their Shapes, that every Particular in one and the ſame Kind hath Different Figures, yet every particular Kind hath but one and the ſame Motion,

tion, which properly and naturally belongs to that Kind of Figure, as a Horſe to Gallop, to Amble, to Trot, to Run, to Leap, to Kick, and the like; and Man to Lift, to Carry, to Walk, to Run, to Pitch, to Dig, to Shoot, to Chop, to pull Back, to thruſt Forward; Likewiſe every particular Part in one and the ſame Kind, hath but one and the ſame kind of Motions, Local or otherwiſe, and every particular Bird hath but one and the ſame kind of Motion in their Flights, and in their Feeding; So Beaſts, every particular Kind hath but one and the ſame manner of Motion and Feeding; So likewiſe all Mankind hath after one and the ſame kind of Motions, belonging naturally to every particular Part of his Body, the only Difference is in the Strength, or Weakneſs, their Reſtraints, or Facilities, but not Different in manner of the Movings. But to return to the Figures, I ſay there are Different Figures belonging to one and the ſame Kind of Figure, but the Ground or Fundamental Figures in every particular Figure are three. As for Example, a Tree at firſt is the Figure of Wood, the ſecond is ſuch a ſort of Wood, as a Cedar, an Oak, an Elm, an Aſh, and the like; alſo of ſuch a nature of Wood, ſome fitter to Burn, than to Build, others that will Grow but on ſuch or ſuch Soils, others to Laſt longer, or Dye ſooner, or Bud and Bear in ſuch and ſuch Seaſons, ſome to bear Fruit, others to bear none. Likewiſe for Animals, the firſt Figure is to be an Animal, that is, to have a Local

figure,

figure; the ſecond Figure is to be Fleſh, not Wood; the third is to be ſuch a Kind of fleſh as Man's fleſh, not Bear's fleſh, or Dog's fleſh, or Horſe fleſh, or Cow's fleſh; and more Examples may be given than I am able to repeat, or my Book to infold; but Animals and Vegetables have more Different figures belonging to every Particular figure or Kind, than Minerals, eſpecially Metalls, which are, as it were, compoſed of one Piece.

CHAP. XVII.

Of the Gloomy Figures, and Figures of Parts, and of One Piece.

AIr is not a Shining Body of it ſelf, but as the Lines of Light ſhine upon it; it is Smooth, and may be a Gloſſie Body, but not a Shining; for though there are Infinite ſeveral ſorts of Brightneſs and Shining, yet two I will deſcribe. As there are two ſorts of Shining figures, ſome that Caſt forth Beams of Light, as bright ſhining Fire, and likewiſe from ſome ſorts of Stones, Bones and Wood, ſo there are ſome ſorts of Figures that onely Retain a bright ſhining Quality in themſelves, but Caſt forth no Beams therefrom, or elſe ſo weak and ſmall, as not uſeful to our Sight, but what is repreſented to us thereon by other Lights; this ſort is Water, Metall, and vulgar Stones, and perchance Air may have ſuch a Shining Body. Theſe Shining Bodies, as

Water, or Metall, or the like, are not perceived in the Dark, but when Light is caſt thereon, we do not onely perceive the Light, but their own natural Shining Quality by that Light. Again, ſome Figures have onely a Gloſs, which is a faint Shining, like as a feigned Light, or an eclipſed Shadow, as all the Pores Vegetables and Animals Skins have; and ſome Figures are Gloſſie through the Thinneſs or Tranſparentneſs, not in the Nature, for by reaſon the Figure is Thin and Tranſparent, the Light ſhining, though Tranſparent, doth not onely ſhew the Light, but the Light gives thoſe Figures a Gloſs. Some Figures, as I have ſaid, are, as it were, all of One Piece, as ſome ſorts of Earth, Water, Vapour and Air, which may be metamorphoſed by Contracting and Dilatation; Others of Divers pieces and ſeveral works, as Vegetables and Animals, wherein are Joynts and Knots, ſome parts Soft, and ſome Liquid, ſome Firm, ſome Hard, every Part having a ſeveral Figure, which Varieties and Contrarieties ſerve to the Conſiſtence and Preſervation but of one Perfect figure; but Animals of all other Figures have the moſt Variety of Works, and ſeveral Motions.

CHAP.

CHAP. XVIII.

Of Round and Square Figures, and their Motions.

OF all Figures a Flat Square Figure is moſt unapt to move Exteriouſly, one Reaſon is, that being Flat, the Matter is Preſs'd, and more Denſed; the other Reaſon is, that being juſt Four-ſquare, it is equally Poiſed at every Corner or Point of the Square, which makes an even Weight or Meaſure, which makes that Figure ſteady; the third and laſt Reaſon is, that Circumference is Uneven, having Variety of parts, as Lines and Points, which Points hinder the Motion of the Lines, and the Lines hinder the Motion of the Points; and as a Flat Square figure is the moſt unapt to move Exteriouſly, ſo a Round Smooth figure is the moſt apt and ready to move Exteriouſly, by reaſon the Circumferenced lines are Smooth, and without Parts, or Inequalities, being all in one Round piece, without Parts, or Different figures, or Inequalities, as Square figures have with Lines and Points, which makes the Circumference uneven, which Uneven, as Unequal Circumference, cauſes Unequal and Untimely motions; beſides, the Corner figures, which are Pointed figures, are apt to faſten or ſtay on other Bodies, which retards Motion, whereas a Smooth Round figure moves without Retards,

I ſay, according to its own Proper figure, but it may be retarded by other Figures or Creatures; beſides, the Round figure hath no baſis or bottom to ſtand or reſt on, being all alike, or of one Piece without Ends, ſo as it moves all as one Proper and Intire figure, having not any Points to fix or ſtick to other Bodies. This is the Reaſon Snow falls Slower than Rain or Hail, becauſe Snow is Triangular, which is pointed, and Rain and Hail is Round in the Exterior as well as Interior parts, which makes it fall more Forcibly, whereas Snow falls more Retardedly or Slowly, being more Exteriouſly Uneven; But as for Deſcenſions, as ſome Bodies deſcend Slowly or Quickly by the cauſe of their Exterior figures, as being Square, Triangular, or Round, or according to their Denſity or Rarity, ſo according to their Interior or Exterior motions; for ſome Outward Shapes will cauſe ſome Creatures to be Agiler or Slower, in deſpite of their Inward or Interior Forms, Motions, and Natures; and ſome Interior Shapes, Natures, and Motions will cauſe ſome Creatures or Shapes to be Slower or Agiler in deſpite of their Exterior Figures, Shapes, or Motions.

CHAP. XIX.

Of Heavy and Light Bodies.

THere are four Principal cauſes which make the Effect of Heavy or Weight, as firſt,

firſt, Bulk or Quantity of Body; next, the Groſneſs of the Subſtance of a Body; thirdly, Denſity; and fourthly, the Form or Figure of the Body; Alſo there are four Principal cauſes that make Lightneſs, as Little Quantity of Subſtance, Purity of Subſtance, Rarity of Subſtance, and the Form or Figure of the Subſtance or Body.

CHAP. XX.

Of Bodies that are apt to Aſcend or Deſcend.

THere are ſo many ſeveral Cauſes that make ſome Bodies apt to Aſcend, and others to Deſcend, as I can neither Expreſs nor am capable to Know or Underſtand; but thus much I have obſerved, that the Cauſe is as much if not more in the outward Form or Shape of the Body, as in the Nature of the Subſtance, for though all Pure and Rare bodies are Lighter than Groſs and Denſe bodies, yet ſome Bodies that are Light or of Little weight, are apt to Deſcend, and others as Light or Little of weight, are apt to Aſcend; as for Example, a flake of Snow is as Light as a downy Feather, yet the Snow is apt to Fall, and the Feather is apt to Riſe; as for the Cauſe or Reaſon, I can perceive none but the outward Form or Shape, for the Feather being more Porous in the Exterior Figure, although more Denſe in the Interior Subſtance than Snow, makes it to have a more Exterior Lightneſs, and ſo an aptneſs to Aſcend; Alſo Duſt that is Hard

and

and Denſe, is apt to Aſcend, and Water that is Porous or Rare, is apt to Deſcend; the reaſon is, the Interior Parts are more apt to Divide into Small Parts, being of a Dry and Crumbling Nature, and the Parts in the Separating fly up like Atoms, whereas the Exterior Part of Water is Wet, and ſo Glutenous, and Cleaving, which cauſes the ſeveral Parts to ſtick, or Unite cloſer, and in a greater Bulk or Body, for all Moiſt bodies are as apt to Unite as to Divide, if not apter, whereas very Dry bodies are apt to Divide, but not to Unite, but this outward Drineſs in Duſt, and outward Wetneſs in Water, is the cauſe that the one becomes more Heavy by Bulk or Quantity, although more Light by Nature or Quality, the other more Light by Smallneſs, although more Heavy by Nature or Quality, for certainly Denſe bodies in Nature ſhould be more Heavy than Rare; But this is to be obſerved, that Wet Rare bodies are more Heavy than ſome Dry Denſ bodies, much more are Wet Rare bodies Heavier than Dry Rare bodies, but one and the ſame Subſtance will be Lighter when it is Dry than when it is Wet; as for Experience, a large flake of Snow falls down much Lighter, and ſo Slower, than a ſmall drop of Water, yet the Interior nature of Snow and Water is one and the ſame, for Snow is but congealed or denſed Water. Now the cauſe that makes a flake of Snow deſcend lighter than a drop of Water, is two-fold, the one, that Denſed water as Snow is Exteriouſly Drier than water Undenſed, which makes it Exteriouſly Lighter,

Lighter; the other cauſe is, that Snow ſeems to be Exteriouſly of a Triangular Figure, although the Interior Figure is Circular, as being Water, for Water that is not Denſed or Contracted into Snow, is Circular, both Exteriouſly and Interiouſly, which Figure ſeems to my reaſon to be more Poiſed and Heavy than the Triangular, which ſeems to be more Light and Wavering than a Circular Figure; But to draw towards an end of this Chapter, Aſcending and Deſcending is as often cauſed by the Exterior Figure or Shape of a Body, as by the Nature and Quality of the Subſtance; and to give a more Groſs and Viſible Example, a Bird, which is of a much greater Bulk, and hath a much Heavier Body than a Worm, yet by the help of the Exterior Shape it is much Agiler than a Worm, and can Fly high up into the Air, when as a Worm for want of ſuch an Exterior Figure is forced to creep on the Ground; the truth is, that all Natural Exterior Motions and Actions are according to the Exterior Shapes of every Creature or Subſtance.

CHAP. XXI.

Why Heavy Bodies Deſcend more forcibly than Light Bodies Aſcend.

IT is to be obſerved, that Weighty Bodies Deſcend with more force than Light Bodies Aſcend; the reaſon in my Opinion is, that Motion is more Free and Agiler in Deſcent, than Aſcent;

Aſcent; for as one Weight upon an other makes more Weight, ſo one Motion upon an other makes more Force, and Motion being Quicker in Deſcents than Aſcents, doubles the Strength, Weight, and Force of Deſcending Bodies; an other reaſon in my Opinion is, that the Earth is more apt and hath more force to attract Heavy bodies, than the Sun or the other Planets to attract Light bodies; beſides, there is a Sympathy between Bodies of a like Nature, as Light bodies to Light bodies, and Heavy bodies to Heavy bodies, and the more Groſs a Body is, the Stronger are the Interior and Exterior motions, I cannot ſay they are the moſt Agil, but the moſt Forcible; and to prove that Motion is freer in Deſcents than in Aſcents, is, that a Man or any other Creature can more eaſily Deſcend or go down a Hill or Mount, than Aſcend or go up a Hill or Mount, although the Motions of the Feet, Hands, and whole Body be one and the ſame; alſo a Bird Deſcends with a more forcible Flight than it Aſcends, for the Weight of the Body hinders the Aſcent of the Body, and the Weight of the Body helps the Deſcent of the Body, and there is not any Thing or Body, that hath not ſome Weight, even the Lighteſt, as Feathers, Duſt, Vapours, or any thing elſe, were it an Atom, but hath ſome Weight, and if all Bodies have Weight, even the Rareſt, and Smalleſt, and that Weight is more apt to Deſcend than Aſcend, then it muſt neceſſarily follow, that Heavy bodies muſt more

more forcibly Deſcend than Light bodies Aſcend.

CHAP. XXII.

The Obſervations of Human Senſe and Reaſon.

HUman Senſe and Reaſon hath obſerved, that the Elemental Worlds or Globes have Spherical figures or bodies, and that their Exterior Motion is according to their Exterior ſhapes, as well as to their Interior motions and creations; and it is to be obſerved, that all Exterior motions are Sympathetical to their Exterior ſhapes; but miſtake me not, for I mean, their Exterior motions and Exterior ſhapes are according to their Interior natures, when as they move of Themſelves, for when they are moved by other Creatures or Bodies, they are moved by Force, and not by their own Natural motions or ſhapes, but by other more Powerful motions or ſhapes; but although Human Senſe and Reaſon hath obſerved the Different Kinds and Sorts of Creatures, as alſo the Different Changes and Motions of Several Creatures, yet Human ſenſe and reaſon hath not, and, I doubt, cannot obſerve and find out the Cauſes and Reaſons, or Deſignes, why ſuch Kinds or Sorts of ſuch Creatures as there are, and not other Kind or Sorts of Creatures, as alſo, why ſuch or ſuch Shapes, and why ſuch or ſuch Motions, and not others, but onely this Anſwer

from Human ſenſe and reaſon can be made, that there cannot be a Part, but muſt have a Figure, and therefore every Creature muſt be figured, and what Figures ſoever were made in Infinite matter, Human ſenſe and reaſon may make the ſame Queſtion or Obſervation; alſo Human ſenſe and reaſon may Imagine or Believe, that there may be Infinite Several ſhapes in Infinite parts, and Infinite Several motions in Infinite ſhapes, which are not ſubject to Human ſenſe, if not to Human reaſons, but I believe to both; yet this is to be obſerved by Human ſenſe and reaſon, that there is a Continuance in the Several kind and Several Sorts of Animal, Vegetable, Mineral, and Elemental Creatures; but, as I ſaid, that Human ſenſe and reaſon hath not yet obſerved or perceived, why each Kind or Sort of Creatures ſhould have ſuch Shapes and Bodies as they have, as whether the Animate matter and motions are bound or tied to the ſeveral Degrees or Temperaments of Unanimate matter, as to make ſuch Particular kinds and Particular ſorts in Particular kinds, and Particular creatures in Particular ſorts; or whether the Animate matter and motions work and create ſuch Diſtinct ſhapes in Diſtinct kinds, and Diſtinct ſorts amongſt Diſtinct creatures by and in their Infinite Wiſdom, Prudence and Ingenuityty, in Infinite parts, in Infinite matter; for Infinite matter and motion lives in Infinite parts, and Infinite parts live in Infinite matter and motion, but that part of Infinite matter and

motion

motion that is in Human creatures is not capable to Know or Conceive the Infinite Wiſdom, or Power, but whether it be capable to Know or Conceive thoſe ſeveral Cauſes and Effects, or hath not obſerved according to that Degree of Extenſion of Obſervations ſo much as Human ſenſe and reaſon may extend, as to perceive the Cauſe or Reaſon why the Elemental worlds are Spherical, why Animals are Local, and not Vegetables, and why and for what reaſon ſome Creatures are made of an Upright ſhape, as Men, and ſome ſo Bending and Stooping, as Beaſt; alſo why and for what reaſon ſome Creatures have ſuch Shapes, which is onely fit and proper for ſuch Qualities and Faculties, and others not; as for Example, what Reaſon, or Cauſe, or Deſign is in Infinite matter and motion, that Birds are onely capable to Flie, and not Men or Beaſt; the Anſwer will be, it is their Shape cauſeth them to Flie, and Men and Beaſt to other Actions that Birds are not capable of; but I ask, Why and for what reaſon have Birds their Shapes, and Beaſt their Shapes, and Men their Shapes, and Fiſh their Shapes, and Trees their Shapes, and Flowers their Shapes, and Fruits their Shapes, and Elements their Shapes, and not other kind of Shapes? But this Queſtion of the Deſigns, Cauſes and Reaſons of theſe Differences, Human ſenſe and reaſon hath not extended ſo far as to give or declare the Reaſons or Cauſes, I will not ſay, but that Human ſenſe and reaſon may gueſs at them, and may

probably and happily light or chance on the Right and Truth of ſome of them, but Human ſenſe and reaſon can never attain to a Perfect knowledge, becauſe Infinite is not capable of Perfection either in Knowledge or Power; but to conclude this Chapter, Human ſenſe and reaſon may aſſociate in Human parts and creatures, as many Men joyn, as in one Body and Mind, as with all their Induſtry of their Senſe and Reaſons, ſo as the ſeveral Obſervations of many Men in many Ages, may find out ſome Truths, Cauſes and Effects, ſo that many ſeveral Obſervations, and many ſeveral Experiments in many Ages, may make or produce ſeveral Knowledges and Wiſdoms, as ſeveral Kinds or Sorts of Knowledges, Prudence, or VViſdom, or Ingenuity and Invention; all which Several or Particular Knowledges, either Senſitive, or Rational, or both, are produced like as Several Generations of Several Creatures.

CHAP. XXIII.

Of Change.

THe Change of Motion in ſeveral Figures makes all the Change and Difference amongſt ſeveral Creatures, as their Proprieties, Faculties, Effects, Sympathies, Antipathies, Creations, Productions, Times, Seaſons, Kinds, Sorts, Particularities, Decays, Diſſolutions, Tranſmigrations, Metamorphoſings, and the like.

CHAP.

CHAP. XXIV.

Of the Variety of one and the ſame Sort of Shapes and Motions.

SOme Shapes have Power over others, and ſome Motions have Power over other Motions, and ſome Degrees or Temperaments of Matter have Power over other Degrees or Temperaments of Matter; as for Example, ſome Liquid Subſtance hath Power over other Liquid Matter or Subſtance, as Liquid Milk will quench Liquid Vitriol, and Liquid Oyl will quench Liquid Aqua-fortis; and ſome ſorts of Dry cold will Over-power ſome ſorts of Dry heat, and ſome ſorts of Dry heat will Over-power ſome ſorts of Dry cold, and ſome ſorts of Moiſt cold will Over-come ſome ſorts of Moiſt heat, and ſome ſorts of Moiſt heat will Over-come ſome ſorts of Moiſt cold, and ſo ſome ſorts of Moiſtures will Over-come ſome ſorts of Drineſs, and ſome ſorts of Drineſs will Over-power ſome ſorts of Moiſtures, and ſome ſorts of Heats, and ſome ſorts of Cold, and ſome ſorts of Cold, and ſome ſorts of Heat, will Over-come each other; alſo ſome Contracted motions will Over-power other Contracted motions, and ſome ſorts of Atractive motions will Over-power other ſorts of Attractive motions, and ſo for Retentive, Digeſtive, Dilatative, Expulſive, and the like. But there is ſuch Variety in Infinite

finite matter and motions, as ſuch a Finite Creature as I, cannot expreſs.

CHAP. XXV.

The Different Degrees of one and the ſame Kind or Sort of Degrees of Matter and Changes of Motions.

DEnſity is made by Contracting motions, and Weight by Attracting motions, and Rarity is made by Dilatating motions, and Lightneſs by Expulſive motions, or at leaſt by ſuch Dilatating motions as are next Degree to Expulſive motions; but there are ſeveral Kinds or Sorts of Denſed bodies, and ſeveral ſorts of Weighty bodies, and ſeveral kinds and ſorts of Rare bodies, and ſeveral ſorts and kinds of Light bodies; for as there are ſeveral Degrees and Changes of Motions, ſo there are ſeveral Degrees in Mixtures and Temperaments of Matter or Subſtances; for as there are ſeveral ſorts of Contractions, Attractions, Retentions, Digeſtions, Dilatations, and Expulſions, ſo there are ſeveral ſorts of Denſities, Rarity, VVeightineſs, and Lightneſs; and as there are ſeveral Kinds and Sorts, ſo there are ſeveral Degrees, as more Denſed, and leſs Denſed, more Rare, and leſs Rare, the ſame may be ſaid in Heavineſs, Lightneſs, &c. and that ſort of Contraction, and that ſort of Retention, nor that ſort of Denſity, and that ſort of Weightineſs, is not in the Creation

tion or in the Propriety of ordinary Earth, as in the Creation or Propriety of Metal ; nor thoſe ſorts of Contractions, Retentions, and Attractions, nor thoſe ſorts of Denſities that are in Metal, are not in Stone, neither is there the ſame ſorts of Denſitie , or Weightineſs, or Motions, in one Part of Earth as in an other, nor in one ſort of Metal as in an other , nor in one ſort of Stones as in an other ; as for Example, there is great difference both in the Denſity and Weight between Gold and Lead , and ſo the like for all the reſt ; but ſome Denſities and Motions between ſome Stones and Metals, are more near or alike to each other, than between Metals and Metals, and Stones and Stones ; as for Example, Gold and Diamonds are more neer the Nature of each other, than Lead to Gold, or mouldring Stones to Diamonds ; and as there are different degrees of Denſe and Weighty bodies, ſo in Rare and Light bodies ; and as there is difference of Contracting, Attracting, and Retentive motions, ſo there is difference of Digeſtive motions, and Dilatative motions, and Expulſive motions ; alſo thoſe Rarities or Lightneſs, that are in Feathers, and Hairs, and Wool, are not of like Degrees, and millions of Examples might be given; but theſe are enough to inform my Readers. But to conclude, although there be prime Kinds and Sorts of Degrees, Motions, and Figures, yet there are Infinite ſeveral Particulars in each Kind and Sort.

CHAP.

CHAP. XXVI.

Of Tranſmutations.

TRanſmutations are not Metamorphoſes, for to metamorphoſe is to change the Shape and Interior form, but not the Intellect, which cannot be without a new Creation, nor then, but ſo as partly the Intellect changes with the Shape and Interior form, but all Bodies are in the way of Tranſmutations perpetually; as for Example, the nouriſhing Food that is received into the Stomack, is changed into Chylus, Chylus into Blood, Blood into Fleſh, Fleſh into Fat, and ſome of the Chylus turned into Humours, as Choler, Flegm, and Melancholy, ſome into Excrement, which Tranſmigrates through the Body into Dung, Dung into Earth, Earth into Vegetables, Vegetables into Animals again, by the way of Food, and likewiſe Animals into Animals, and Vegetables into Vegetables, and ſo likewiſe the Elements. But indeed all Creatures are Created by the way of Tranſmutation; as for Example, Hens or other Fouls lay Eggs, and then ſit on them, from whence a Nouriſhing heat is Tranſmigrated from the Hen into the Eggs, which turns into a kind of a Chylus, then into Blood, Blood into Fleſh, Fleſh into Sinews, Sinews into Bones, and ſome into Veins, Arteries, Brains, and the like. For Tranſmutation is only the Mixing, Sifting, Searching, Tempering faculty

faculty of Animate matter, which is Self-motion, and Motion is the onely Tranſmuter, otherwiſe Infinite matter would lie Idle eternally, though I cannot well conceive how Infinite can be without Motion, but howſoever, we perceive ſo much as there are proper Motions, and Mixtures of Matter belonging to every particular Figure; and though Figures do produce Figures, yet Figures do not order the Creation, for it is not the Figures that Create, but Creation that produces by Figures, which Creation is Motion, which Motion is Animate matter, which Matter Creates and Diſſolves by the way of Tranſmutation, all Figures Diſſolving to Create, and Creates to Diſſolve, but Diſſolving and Creation, which is that we call Life and Death, hath onely a reference to the Figures, but not of the nature of the Matter.

CHAP. XXVII.

Of Metamorphoſing of Animals and Vegetables.

IT is impoſſible for Animals and Vegetables to be Metamorphoſed without a Creation, as to tranſform a Man into a Tree, or a Tree into a Man, or a Man into the form of a Beaſt, as to turn Mans-fleſh into Horſe-fleſh, or Horſe-fleſh into Mans-fleſh, or to turn one Man's fleſh into another Man's fleſh, or an Oak into a Cypres, or a Cypres into an Oak, and ſo the like in

all Vegetables and Animals, thus Transforming the Interior forms, or rather Changing the Interior forms like Garments, putting one and another Interior form upon one and the ſame Intellect nature, which is impoſſible, by reaſon the Interior forms and Intellect natures are Inſeparable, ſo that Deſtroying the one Deſtroys the other, and a Change cannot be made of either without the Diſſolution of the whole, no more then a Man can change the whole Building without pulling down the Houſe; for though they may make ſome Alterations in the outward Shape, as to add ſomething More, or take away and make all Leſs, or Thicker or Thinner, or Higher or Lower; but cannot alter the Interior form, which is the Foundation, but if they pull it down, the ſame Materials may be put into another Form, or into the ſame Form they were at firſt, but it muſt firſt be New built again before it can have thoſe Forms, and they muſt ſtay the time of Building; So for every Vegetable Creature, and Animal Creature, they cannot be Metamorphoſed, by reaſon Metamorphoſing is to change their Forms, without a new Creation, and they cannot change their Forms without a Diſſolution, and then Created a new, by reaſon the Intellect and the Interior form is as one Body, and not to be ſeparated, for the Interior forms of thoſe Creatures, and the Intellects, depend upon one another, and without the one the other cannot be. The Intellect and the Interior form may be divided together into

into parts, but not Separated apart; though the ſeveral ſorts of one and the ſame Kind, as Animal kind, may be mixed in their Creations, as to be ſome part a Beaſt, ſome part a Dog, or the like, and part a Man, and ſome Creature partly a Bird and partly a Beaſt, or partly a Beaſt and partly a Fiſh, yet the Intellect is mix'd with the Interior Form, and the Exterior ſhape with the Interior form; the like in Vegetables; and if the Interior forms and Intellects of each Sort, nay, of each Creature, cannot be changed, much leſs of each Kind; thus the Intellect natures and Interior forms of it can never be without a new Creation; and as for the Exterior ſhapes of Animals they may be Altered, but not Changed, for Animals, of all other Creatures, have their Shapes moſt United to the Interior form and Intellect nature of any other Creature in Nature. But I deſire my Readers not to miſtake me for want of Terms and Words of Art, for by the Interior or Intellect nature, I mean ſuch Properties, Diſpoſition, Conſtitution, Capacity, and the like, that makes it ſuch a Creature. The Interior form is ſuch a Subſtance, and ſuch a Sort, as Fleſh, or Fiſh, or Wood, or Metal, and not onely ſo, but ſuch a ſort of Fleſh, as Mans-fleſh, Horſe-fleſh, Dogs-fleſh, and the like; So the Wood of Oak, the Wood of Maple, the Wood of Aſh, and the like; ſo the Gold metall, the Iron metall, and the like; for Horſe-fleſh is not Mans-fleſh, nor the Wood of Oak the Wood of Aſh, nor the Metall of Gold the

Metall of Iron; and by the Exterior form I mean the Outward-ſhape.

CHAP. XXVIII.

The Metamorphoſing of the Exterior forms of ſome Figures.

ALL Figures that are of an United piece, as Water and Fire are, and not in Parts, as not having Several parts of Different natures, as Animals and Vegetables have, may be Metamorphoſed out of one Form into another, and Re-change into the Original form again, yet it is onely their Exterior form, not their Interior nature; as for Example, Water that is frozen, or turn'd to Hail, or Snow, the Exterior is onely Metamorphoſed, for the Interior nature, which is the Circular line, is Unaltered; likewiſe when the Circular line is extenuated into Aire, the Interior circle-line is not Changed, but when the Interior nature is Diſſolv'd, and the Matter it was compoſed of turned into other Figures. Likewiſe Metalls, when the Interior nature is changed, it cannot be re-changed again without a New creation; for if we can turn one Metall into another, yet it is not by the way of Metamorphoſing, but Tranſmutation, otherwiſe we may ſay, we can turn Animals and Vegetables into Water, when we diſtill them; but the Magick of Chimiſtry ſhall not return them to their Interiour nature, nor Exterior

Exterior ſhape. For although their deſires make them believe it poſſible to be done, yet they muſt know Subtracting is not Metamorphoſing, but rather of the two, Tranſmutation, being one of the chiefeſt Requiſites of Tranſmutation. And as for thoſe Creatures that are compoſed of Parts of Different natures, as I have ſaid, their Exterior form cannot be Metamorphoſed, becauſe thoſe Motions that Metamorphoſe one Part, cannot Metamorphoſe an other. And though every Part is Different, yet they generally Unite to the conſiſtence of the whole Figure, whereby the ſeveral Transforming motions on the ſeveral Parts would make ſuch a Confuſion, as upon neceſſity muſt Diſſolve the Intellect nature, and Interior form of that particular Figure; thus ſtriving to Alter would Deſtroy.

CHAP. XXIX.

Of Fix'd and Looſe Elements.

ALL Elements are Created as other kind of Creatures are, as Animals, Vegetables, and Minerals, as to be Produced as one Creature from others, yet in the Production of all Creatures there are ſeveral Wayes, Manners, Orders, Times, Degrees, and Motions, which are Different in their Productions, and as in their Productions, ſo in their Diſſolutions; for ſome laſt not a Day, others thouſands of Years; but as for

for Elements, thoſe that are Elemental Worlds, as the Sun, and all the Planets, as alſo the Fix'd Stars, cannot be Metamorphoſed no more than Animals or Vegetables that are of many Parts, but Looſe Elements as are between the Celeſtial and Terreſtrial Worlds may be Metamorphoſed, that is, they may Change their Exterior forms, and for their time of Metamorphoſing, may Change or Alter their Exterior Proprieties.

CHAP. XXX.

Of Looſe Humors and Elements.

AS for particular Motions that make Looſe Humors, or Looſe particular Elements, which Humors are rather the Excremental Parts, than the Subſtantial Parts, which Subſtantial Parts are the Frame, Form, Conſiſtence, Nature and Entity of the whole Body of the Creature, which Frame, Form, Conſiſtence, Nature and Entity is not to be altered without a Diſſolution, but thoſe Looſe and Excremental Parts Change and Alter in one and the ſame Body; as for Example, in the Body of man inhabit four Elemental Humors, as Phlegm, Choler, Melancholy, and Blood, which Change and Rechange, Increaſe and Decreaſe, as Phlegm changes into Choler, Choler into Melancholy, and Melancholy, Choler, and Phlegm into Blood, and Blood into all the former Particulars; alſo Phlegm

Phlegm changes into Water, Melancholy into an Earthly Subſtance, and Choler into Fire; alſo Phlegm changes into Salt, Choler into Oyl, and Melancholy into Vitriol; and all theſe Humors, as Flegm, Choler, Melancholy, and Blood change into Fleſh, and all the Looſe Humors change into Dung, which manures the Body, and then caſt forth the Unuſefull parts into Excrements to manure other Creatures; the like in the Elemental Worlds, the Looſe parts help not only to manure their own Bodies, but each Globe helps to manure each other, which cauſes Procreations and Diſſolutions, as Increaſe and Decreaſe of Looſe parts; But to conclude this Chapter, as Animal bodies, as alſo Vegetables and Mineral bodies have Looſe parts, ſo Elemental Globes have Looſe parts in their Subſtantial bodies, but theſe Looſe parts are ſo neceſſary, as they could not well Subſiſt without them, no more than one Creature can Subſiſt without an other, for all Creatures are not only Produced but Nouriſhed by each other, and muſt of neceſſity be ſo, by reaſon the Only matter is Infinite, and the Parts in Only matter are Infinite, as being divided into Infinite Creatures.

CHAP.

CHAP. XXXI.

The Change of Motions.

MOtion doth Alter and Change in one and the ſame Creature or Figure, for a Young man appears not like as an Old man, nor an Old man as a Young man, nor a man when he is Sick, appears not as when he is Well, nor a man when he is Cold, appears not as when he is Hot, alſo a man when he is Sad or Melancholy, appears not as when he is Merry; and as the man alters in Countenance, Complexion, Temper, Humour, Sickneſs, Health, Paſſions, Affection in Mind or Body, Motion Changes.

CHAP. XXXII.

Of Lines.

IT is to be obſerved, that all Creatures that are compoſed of Lines, are Soft, Smooth, Shining, whether they be Triangular lines, Square lines, Round lines, or Parallel lines, but the Smaller, Straighter, and Smoother the Lines are, the Brighter, and Finer, and Softer, are thoſe Creatures; the reaſon is, that Lines are the even'ſt Rules and juſteſt Meaſures, having no divided Parts, but yet according to the Roughneſs or Ruggedneſs of the Lines are the Creatures ſofter. Then it is to be obſerved, that all

smoothneſs
or harder.

Works

Works of Contractions and Retentions are Stronger, and more Lasting, than those Figures that are more Light and Porous or Extenuating. Thirdly, it is to be observed, that the Animate matter, which works upon the Light, and Thin part of Dull matter, is more Agil, and Nimbler than that which works upon the Thick and Solid matter, unless the strength of the Motions be not Above, or at least Equal to the Solidity of the matter. Also it is to be observed, they can make Solid Figures of Light and Thin matter, by their close and curious Joynings, Injections, and Mixtures, and Porous and Light Figures of Solid matter, by their Dividings and Spreadings; but though the Animate matter can Contract and Dilate the Thick or Thin, Light or Heavy, Fluid or Soft, yet it can not Alter the Nature, or Degrees of the Inanimate part of matter, neither can the Animate matter make it self Weaker or Stronger than by nature it is, for the Entity of Only matter cannot be Changed; but though the nature cannot be Altered of the Inanimate part of matter, yet it may be Cut and Carved, and Joyned and Dispersed into several Figures, so the Animate matter, although the nature cannot be Altered, as to make each Degree Weaker or Stronger, yet they may move Swifter or Slower, according as the Inanimate part of matter is, they Work on, or according as the Curiosity of the Figure requires; and as I have said before, there be Infinite degrees of the Inanimate part of matter, as Solid and Fluid,

Thinner and Thicker, Lighter and Heavier, Harder and Softer; and Infinite degrees of Animate matter, as Stronger and Weaker, Swifter and Slower; and though I have ſaid, that the Animate matter is the Acuteſt part of Only matter, yet I do not mean the Thin Inſipid matter, as I may call it for diſtinction-ſake, for there is no Inſipid in Infinite and Eternal matter, though there be in Inanimate Immoving matter, but the Animate matter is the Infinite extract of the Entity of Infinite matter, it is the Quinteſſence of Nature.

CHAP. XXXIII.

Of Circles.

A Circle is a Round figure without Ends, having a Circumference and a Centre, and the Figure of a Circle may more aptly alter the Exterior form than any other Figure can; for a Circle-line may be Contracted many ſeveral ways, and after divers forms or faſhions, but it cannot be Dilated but after one manner of way, which is to Dilatate, and ſo to inlarge the Circumference, and the Parts from the Centre by an equal Dilatation to the Circumference; for if a Circle be extended in part, and not in whole, as it Extends or Dilates one way, it Contracts in another way, whereas a Parallel line may be Dilated or Extended in Parts, without a General alteration, but a Circle-line cannot, for

for as one part ſtretches out, another part draws in; but, to conclude, a Circle-figure may be Dilated and Contracted, and be Changed into many ſeveral Exterior figures or forms, and yet keep the Interior figure or form; alſo a Circle may move Interiouſly, as alſo Exteriouſly ſeveral ways, as to move from the Centre to the Circumference, and from the Circumference to the Centre; as alſo to move Circle-ways according to the Figure, as to move Round.

CHAP. XXXIV.

Of the Extenſion and Contraction of Circle-figures, or Circle-lines.

THe Nature of Extenſions and Dilatations ſtrives or indeavours to get Space, Ground, or Compaſs, as alſo to Smooth, Plain, or Level, the Subſtance or Matter thoſe Motions work on, and with, but the Nature of Contracting motions indeavours or labours to caſt or thruſt out Space, Place, Ground or Compaſs, labouring to draw and croud Subſtance Matter or Parts cloſe together, and this is the reaſon that Circle-lines or Figures may be Contracted many ſeveral Ways, Forms or Figures, becauſe Contraction flings out the Compaſs, and onely makes uſe of the Line or Circumferent circle, drawing and laying the Line into millions of ſeveral Works or Figures, without breaking or dividing the Exterior form,

which is the Circle; and this is the reaſon, that when the Contractions are over-powered by Dilatations, and that the Circle extends to the full Compaſs, it returns to its Original form, which is a Round circle, without any alteration; and thus may a Circle-figure or Line Exteriouſly alter ſeveral ways by Contractions ſeveral times, and yet keep the Interior form, figure or nature; alſo Circle-lines or Figures may be Exteriouſly altered by Mixt Exterior motions, as for Example, when a Circle-line ſhould be wound about a Round ſtaff, or ſuch like thing, the winding about the Pole or Staff is the Motion of Contraction, at leaſt one way, as when the Compaſs is turned Inward, as towards the Centre, yet by winding one Line above another is Extenuation, and millions the like Examples may be given. But to draw towards a concluſion of this Chapter, a Circle may be Drawn or Contracted into a Square figure, and into a Triangular figure, and into a Cube figure, and into a Parallel figure, the Parallel is made by drawing the Circle long-ways; but all thoſe ſeveral Figures, and many other Figures, made partly of each Figure without dividing the Circle; alſo Circle-lines may be very Different, and yet not different in the Compaſs or Circle, as ſome Circles may be Broad, ſome Narrow, ſome Round, ſome Flat, ſome Twiſted, ſome Smooth, ſome Rough, ſome Edged, ſome Pointed, for though the Compaſs muſt be evenly Round, yet the Matter

Matter of the Circle may be uneven; and though the Figure of a Circle is to be but one intire Figure in and of it ſelf, yet the Subſtance or Matter of the Circle may be different; but as for the Figure of a Circle, ſome may ſay, that a Circle is not a Circle, when by ſeveral motions it is made Square or Triangular; I anſwer, that it is a Circle ſquared, but not a Circle broken; for if the Circle be whole, as not broken or divided, the Interior nature is not Diſſolved or Deſtroyed, howſoever the Exterior figure or form is changed or altered, it is a Natural or Perfect circle ſtill, although it Exteriouſly ſhould be put into a Mathematical Square or other Figure. But, to conclude, (for I have digreſs'd) it is to be obſerved, that all thoſe Figures that are by Nature made of one Piece, without Diſtinct parts and Several Tempered ſubſtances, their Exterior forms or ſhapes may be changed and re-changed without any alteration of their Interior proprieties, forms or natures, whereas thoſe Creatures or Figures, that are made into ſeveral Diſtinct parts, and compoſed of ſeveral Tempered ſubſtances or matter, could not be ſo changed without an Interior Deſtruction, beſides the alteration of Different parts and Different compoſures or temperaments, would cauſe a Confuſion of Several motions in their Transformations.

PHI-

PHILOSOPHY.

PART V.

CHAP. I.

Of the four Worlds, of Fire, Air, Water, and Earth.

TO Human Senſe and Reaſon, there ſeems a neceſſity of four ſeveral Kinds or ſeveral Sorts of Worlds, as a World of Fire, a World of Air, a World of Water, and a World of Earth; alſo there ſeems a neceſſity to have a ſufficient Proportion of and in each World, for if there were not a World of Air, the World of Fire would go out, and if there were not a World of Water, the World of Earth would be inſipid, beſides the World of Fire would Burn and Conſume it, and if there were not a World of Earth, there would not be ſolid Creatures nor a firm Mould to Create ſolid Creatures in, for if there were not Solidity, Denſity,

Denſity, or Firmity, all Creatures would be ſubject to Diſſolve, before they were perfectly made; And if there were not a World of Bright ſhining hot Burning Fire, the other VVorlds would want Exterior Heat and Light; I only mention four Worlds, but there may be many more, for any thing Senſe and Reaſon can perceive to the contrary, but in my following Chapters I ſhall treat of the Creations of the Elements, and of their Actual motions.

CHAP. II.

Of Different Motions and Creatures.

ALL ſorts of Extenuating motions make not Fluidity or Wet, but ſuch a ſort of Extenuation on ſuch a Tempered or ſuch a Degree of Inanimate matter, for ſome ſorts make Porous, Spongy, Soft, Smooth bodies, and not Wet or Fluid; alſo ſome Extenuations make Light, other ſorts of Extenuations make Heat, and ſo may be ſaid for all other Sorts of Motions and Effects; as for Example, all Expulſive motions do not Burn, for there be Infinite ſeveral ſorts of Expulſions, and Infinite ſeveral ſorts of Attractions, Contractions, Retentions, Digeſtions, and Dilatations, which make Infinite Varieties, for there are ſeveral ſorts of Colds, ſeveral ſorts of Heats, ſeveral ſorts of Droughts, ſeveral ſorts of Moiſtures, ſeveral ſorts of Waters, ſeveral ſorts of Air, ſeveral ſorts of Fire,

ſeveral

ſeveral ſorts of Light, ſeveral ſorts of Colours, ſeveral ſorts of Darkneſs, ſeveral ſorts of Vegetables, Minerals, Animals, and ſeveral Particularities; But, to conclude, there is ſo much Variety in every Kind and every Sort, and in one and the ſame Kind, and one and the ſame Sort, and in one and the ſame Creature, as it is impoſſible for any one Creature to deſcribe the Infinite Varieties in Nature; But to make my Readers the better to Underſtand me, I will give an Example for the Variety of one ſort of Motions, which is a Swimming motion; as for Example, a Fiſh Swims, a Swan Swims, a Dog Swims, a Man Swims, thoſe Creatures do but act the Swimming motion, but yet the Swan Swims not like the Fiſh, nor the Fiſh like the Swan, neither doth the Fiſh or Swan Swim like the Dog, nor the Dog like the Fiſh or Swan, nor the Fiſh, Swan, or Dog, Swims like the Man, nor the Man like as thoſe Creatures, for every one of thoſe Creatures Swim after a different manner from each other, and different manner of wayes in each Creatures Swimming; the like Example may be given for Figures, as for Motions; as for Example, all Men are of one and the ſame ſort of Figure, as man's Figure, yet not any two men are alike unleſs as a Wonder.

CHAP.

CHAP. III.

Of Moiſt Colds, and Moiſt Heats, of Dry Colds, and Dry Heats, and of Hot and Cold Motions in general.

HEat doth not make Drought, for there is a Temper of hot and moiſt, nor Cold doth not make Drought, for there is a Temper of cold and moiſt, neither doth Heat make Moiſture, for there is a Temper of hot and dry, nor Cold doth not make Moiſture, for there is a Temper of cold and dry, but when as the Motions of heat and the Motions of drought joyn, they cauſe hot and dry Effects, and when as the Motions of cold and the Motions of drought meet, they cauſe cold and dry Effects, and when as the Motions of heat and the Motions of moiſture joyn, they cauſe hot and moiſt Effects, and when as the Cold motions and Moiſt motions joyn, they cauſe cold and moiſt Effects, but there is Infinite Variety in their ſeveral Effects, as alſo in the Motions, but thoſe ſorts of Motions, which produce Hot and Cold, intermix and preſs into every Creature, as to every Region, ſo theſe Motions work on the Earth, Water, and Air, and into Vegetables, Minerals, and Animals; alſo theſe ſorts of Motions, that make Hot and Cold, change, and work ſome Attractive, ſome Contractive, ſome Retentive, ſome Digeſtive, ſome Dilative, and ſome Expulſive,

for of each Kind there are ſeveral ſorts, as ſeveral ſorts of Cold motions, and ſeveral of Hot motions, as ſeveral Cold contractions, Cold attractions, Cold retentions, Cold digeſtions, Cold dilatations, Cold expulſions; alſo there are ſeveral ſorts of Hot contractions, Hot attractions, Hot retentions, Hot digeſtions, Hot dilatations, and Hot expulſions; but when as theſe ſorts of Cold and Hot motions do Equal each others Power, they make an equal Temper between Hot and Cold.

CHAP. IV.

Of the Motions of Cold and Hot, Drought and Moiſture.

COld and Hot are not made by Different kinds of Motions, or Several ſorts of Motions, but after Different manners or ways of ſeveral ſorts of Hot and Cold motions; as for Example, a Moiſt heat and a Moiſt cold are made by one Kind or Sort of Motion; as for ſome Motions to Draw Matter Outward, and to Preſs and Drive Matter Outward, or to Spread or Dilatate Matter towards the Extreme parts, as from the Centre to the Circumference; and as all Moiſt heat or cold Inlarges or Dilatates from the Centre to the Circumference, or towards the Extreme parts, ſo Dry heat or cold Drives, or Thruſts, or Pulls inward, as from the Circumference to a Centre, and Cold and Hot

Hot retentions Nip or Pinch Parts, or Fix or Preſs into Parts, which cauſes Numneſs and Stifneſs, or Unactiveneſs, and Cold and Hot expulſions Divide and Diſſolve Parts, as when Parts are frozen or burnt aſunder; for it is to be obſerved, the Effects of Hot and Cold are much alike, for very Sharp cold and great Burning heat pains Men equally, and Sharp coldneſs deſtroys ſeveral Creatures with as much Fury and Strength, as Hot Burning heat; neither can I perceive the Hot motions to be quicker than the Cold motions, for Water, to the quantity, ſhall Freez as ſoon or ſuddenly, as any Light matter, as Straw, or the like, ſhall Burn, take quantity for quantity, and Animals ſhall be as ſoon Frozen to death, as Burnt to death, and Cold hath as great a power at the Poles, as Heat hath in the Torrid Zone; As for Vegetables, they are oftner kill'd with Cold than Heat, and it is to be obſerved, that there is not any Thaw or Diſſolving ſo ſuddenly as Froſt, which half perſwades me to believe, that the Motions of Cold, or Cold motions, are more Agil, than the Motions of Heat or Hot motions; but it is to be obſerved, that Hot and Cold motions do oftentimes Diſpute for the Maſtery, when ſometimes the Hot motions get the Victory, and ſometimes the Cold; but when there is an Amity between them, there is Temperature; Alſo it is to be obſerved, that ſome ſorts of Hot motions will Diſpute with other ſorts of Hot motions, and ſome ſorts of Cold motions with

other ſort of Cold motions, where ſometimes one Sort, and then another Sort, gets the Victory, according to their Strength and Advantage.

CHAP. V.

Of Earth.

THe Creating motions that make the Natural Earth, are not ſo Agil, or that Matter Earth is made of, is not ſo Pure, as thoſe Motions and that Matter that makes Water, Air, and Fire, neither do thoſe Motions that created Earth, work ſo Curiouſly or Regularly in Earth, as in the other Elements; beſides, the Creating motions of Earth move or work more Perturbed or Troubled, which is the cauſe that the Exterior figure of Earth is Rough, Groſs and Dark; but all or moſt of the Solid earth's Creating motions, are Attractions, and Contractions and Retentions, which cauſes the Earth to be Thick, Heavy and Denſe, as alſo to be of the Nature of a Load-ſtone, for as the Contractions and Retentions make Earth Solid, Denſe, Thick, Groſs and Heavy, ſo the Attractions make it Draw all things that it can Draw, which makes it Heavy, as alſo to be of the Nature of a Load-ſtone. But this is to be obſerved, that the Creating motions of all Creatures, and their Actual motions may be very different, for the Proprieties or Faculties of Creatures may be different from their Creatings,

tings, but yet their Natural Faculties and Proprieties depend upon their Creatings, and their Creations produce thoſe Faculties and Proprieties.

CHAP. VI.

Of Water.

THe Nature of Water is to be Rare, Fluid, Moiſt, Liquid and Wet, alſo to be Glutenous or Cleaving, alſo to be Smooth and Glaſſie, alſo to be apt to Divide and Unite; the Interior Dilatating motions are the cauſe of the Rarity and Fluidity, the cauſe of the Moiſtneſs, Liquidneſs and Wetneſs, by ſuch Kinds or Sorts of Dilatations as extend in Circle-figures; the Glutenous propriety or faculty is cauſed by the Liquidneſs and VVetneſs, the Aptneſs to Divide and Unite is cauſed by the Rarity, Fluidity, and Glutenouſneſs; the Exterior Smoothneſs and Glaſſineſs is cauſed by the Interior figure, which are Circle-lines, and the Nature of being VVater is cauſed not onely by ſome Sorts of Dilatations, but ſuch a Degree of Dilatations, and not onely by ſuch Sorts and ſuch a Degree, but in ſuch a Figure as a Circle-figure; but yet it is to be obſerved, that there are many ſeveral ſorts of VVater, as ſome VVaters are more Rare than others, and ſome more Light than other, and ſome Waters are Clearer than others, and ſome Waters are Salt, ſome Sharp, ſome Bitter,

Bitter, ſome Freſh or Sweet, and ſome have Cold effects, and ſome Hot, but theſe are not ſo much in the nature of VVater as by joyning and cohering with other Motions, Figures, and Temperaments, which are Dividable from the nature of the VVater; for Salt water may be made Freſh, and ſo may Vitriol water, as alſo that we call Cordial water, the Heat and Strength of Cordial water may be divided from the VVater, all which Chymiſts, and Apothecaries, and Phyſicians know well, viz. thoſe Arts of dividing one Temperament from another, but the Interior nature of VVater cannot be divided in it Self without a total Deſtruction; But to conclude this Chapter, to Human ſenſe and reaſon the Interior figure of VVater is a Circle-figure, and the Interior motion of VVater is Dilatating, as an equal Dilatation from the Centre to the Circumference, but the VVater-circle and the Water Dilatations are of a Middle nature or degree, as between two Extremes.

CHAP. VII.

Of the Wetneſs of Water, and other Sorts of Liquors.

VVEtneſs, which is the Interior nature of Water, is made by Dilatating motions, for all Droughts or Drineſſes are made by Contracting motions, and all Moiſtures, Liquors, and Wets, by Dilatating motions; yet thoſe

thoſe Dilatating motions, as make Wet, muſt be ſuch a ſort of Dilatation as belongs to that Subſtance, as is named Wet, which are Circle-Extenuations or Dilatations, as to Dilatate in a ſmooth, equal Dilatation from the Centre of the Water-circle, to the Circumference of the Water-circle, which Water-circle is of a middle or mean Extenſion, and the Wetneſs of water is cauſed or made by a middle degree of Dilatation, for Dilatating motions may extend Water beyond the degree of Wet, or not Extend or Dilatate ſo far as the degree of Wet, for there is ſuch a Degree, as only to make Moiſt or Liquid, and not ſo far as to make Wet, for though Moiſture or Liquid is in the way to Wet, yet it is not Wet; alſo all that is Soft or Porous, is not Wet, nor Liquid, nor Flowing, as Hair, Feathers, Wool, and the like; nor all that is Extenuating, is not Wet, nor Liquid; as for Example, Light and Fire, and many other Examples may be given; but thoſe Dilatations that make Water, which is to be Soft, Smooth, Moiſt, Liquid, and Wet, are by Circle-extenuations, and the Circle to be in ſuch a degree of Compaſs, and ſuch a degree of Dilatation, as to be in a middle or mean Degree; But there are many ſeveral ſorts of Liquors and Wets, as in Fruits, Herbs, and the like, but the Interior nature of all ſorts of Wets is of ſuch degrees of Circles and Dilatations as Water is; but this is to be obſerved, that ſome things are Moiſt, but not Wet, and ſome things are Liquid, but not perfectly

perfectly Wet; as for Example, diſſolved Gums and diſſolved Sugar may be ſaid to be Liquid and not Wet, and Smoke may be ſaid to be Liquid and not Wet, and Oyl is more Liquid than Wet; nor all that is Fluid is not Liquid, as melted Metall, Flame, Light, and many things more, which I cannot expreſs for Number; alſo all that is Fluid, is not Liquid nor Wet. But to conclude, although all Wets are Liquid, yet all Liquids are not perfectly Wet, and although all Liquors are more or leſs Fluid, yet all that is Fluid, is not Liquid.

CHAP. VIII.

Of the Interior Figure and Motions of Bright, Shining, Hot, Burning Fire.

OF all the Elements, the Interior Figure and Motion of this ſort of Fire is the moſt difficult to Underſtand or Conceive, for by the Agilneſs or Activeneſs it ſeems to be in ſmall divided Parts, by the Peircing and Wounding propriety or faculty, thoſe ſmall Parts ſeem to be Points, by the Exterior Bright Shining Light, it ſeems to be Compoſed of Lines, by the Interior and Exterior Dilatations, it ſeems to be a Rare Body, and how to joyn theſe Differences is difficult; for I cannot imagine, how rare Points ſhould be, for the Figure of a Point is a Contracted Body, as being a Point; alſo a Line is a Continued Longitude, Figure or Body, but Points

Points are ſmall Parts, but not Lines; but I conceive that the Points are the Interior figure, and the Lines the Exterior figure, and ſo thoſe ſmall pointed Parts may joyn in Lines of Points, and may Joyn and Divide as often as they will, and never alter their Interior nature; alſo the Rare nature may be Exterior, and not Interior, as when a number of thoſe Points joyn into one Body, and that United body to Dilatate, or Contract, or Unite, and yet not alter the Interior figure; and it is to be obſerved, that the Exterior motions work or act according to the ſeveral Bodies they work or act on, as ſome Bodies they Dilatate, ſome they Contract, and ſome Retain, but their chief Exterior actions on other Bodies is to Expel; but this is to be obſerved, that theſe Fiery points have different Dilatations, Contractions, and Expulſions in their own Bodies, from the Dilatations, Contractions, or Expulſions of other Bodies; but that which is moſt difficult for my Capacity, is to conceive, how this ſort of Fire, which is Bright-ſhining, Hot-burning Fire, can Dilatate it ſelf ſo Infinitely, as from one ſmall Spark to an Infinite Body of Fire, that is, if the Fire hath Infinite fuel to Dilatate it ſelf Infinitely Upon, and Into, or otherwiſe that this ſort of Fire ſhould have an Infinite power of Transformation, as to convert all Combuſtible matter, or ſuch Fuel it works upon, to Transform that Fuel into the Fires Interior nature; but I conceive, that, if this ſort of Fire had ſuch an Inherent power to

Transform the Fuel into its own Fire's Interior nature, the Fire would be more Strong and Numerous, and to have a more Lasting Continuance; as for Example, a House that is fired, if the House could be converted into the Interior nature of Fire, there would be a Converted house of Fire, or at least the Fire of the House would not go out or die; but Experience informs us, that the Fire dies as the Fuel dissolves; but this may be answered, both for the Dilatation of Fire, and Transformation of Fuel, that as the Fire Dilates it self on the Fuel, so the Fire Expels the Fuel, and with the Fuel its own Pointed parts, in which Expulsion the Fire dies, and the Fuel dissolves from the Inherent nature; so it may be said for the Transformation, that as the Fire Transforms the Fuel, in that Transformation of the Fuel the Fire dies, that is, the Fire and Fuel alter their Interior natures together, and so neither by the Dilatation of Fire, or the Transformation of Fuel, can they stay in a Continued body, but Dissolve together, but these Expulsions take not away the Infinite Interior nature and power of Fire, but, in my opinion, it is impossible, that a Finite creature can have an Infinite power, or Infinite nature, or Infinite proprieties or effects; It is true, Fire doth change those Bodies it works upon, from their Interior nature, and from their Interior and Exterior form, but not to be of the Interior nature of Fire; indeed, Fire doth rather Deform other Bodies, and Transform it self from

from it ſelf, in ſtriving to deſtroy thoſe Bodies it works upon, in which Strife both Fire and Fuel is Transformed from their own Natures and Figures into other Natured figures or Creatures; But this is to be obſerved, that Fire cannot work upon all oppoſite Bodies as it hath an Appetite or Facility, but is bound to work on ſeveral Bodies, according to the nature of the Bodies it works on; and my opinion is, that this ſort of Fire hath power to Transform ſome ſort of Bodies to its own Exterior likeneſs and motions, but not to its Interior nature; I ſay, ſome ſorts of Bodies Fire can do ſo, but not all ſorts of Bodies, that are ſubject to Fire, will be ſo changed; but it is to be obſerved, that the firſt Indeavour and laſt Effect of Fire is, to expel all thoſe Bodies Fire encounters, in which Expulſion it deſtroys it ſelf, altering its own Nature with the nature of the Fuel, ſo that the Deſtroyed becomes the Deſtroyer. But, to conclude this Chapter of Bright-ſhining Hot-burning Fire, though this ſort of Fire hath not an Infinite effect, being a Finite Creature, to Transform other Bodies it works on, into its own Interior nature, yet the Sparks or parts of Fire, may be of the nature of Vegetables Seeds, that when they are put into the Earth, may increaſe numerouſly by the way of Production, ſo Fire may do the like; as for the Sparks or ſmall Parts of Fire being ſet or put to ſome ſorts of Fuel, may increaſe by the way of Production numerouſly, and as ſome ſorts of Vegetable

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from it ſelf, in ſtriving to deſtroy thoſe Bodies it works upon, in which Strife both Fire and Fuel is Transformed from their own Natures and Figures into other Natured figures or Creatures; But this is to be obſerved, that Fire cannot work upon all oppoſite Bodies as it hath an Appetite or Facility, but is bound to work on ſeveral Bodies, according to the nature of the Bodies it works on; and my opinion is, that this ſort of Fire hath power to Transform ſome ſort of Bodies to its own Exterior likeneſs and motions, but not to its Interior nature; I ſay, ſome ſorts of Bodies Fire can do ſo, but not all ſorts of Bodies, that are ſubject to Fire, will be ſo changed; but it is to be obſerved, that the firſt Indeavour and laſt Effect of Fire is, to expel all thoſe Bodies Fire encounters, in which Expulſion it deſtroys it ſelf, altering its own Nature with the nature of the Fuel, ſo that the Deſtroyed becomes the Deſtroyer. But, to conclude this Chapter of Bright-ſhining Hot-burning Fire, though this ſort of Fire hath not an Infinite effect, being a Finite Creature, to Transform other Bodies it works on, into its own Interior nature, yet the Sparks or parts of Fire, may be of the nature of Vegetables Seeds, that when they are put into the Earth, may increaſe numerouſly by the way of Production, ſo Fire may do the like; as for the Sparks or ſmall Parts of Fire being ſet or put to ſome ſorts of Fuel, may increaſe by the way of Production numerouſly, and as ſome ſorts of Vegetable

ſeeds will not increaſe in all ſorts of Earth, ſo Fire will not increaſe in all ſorts of Fuels; but Sparks of Fire put into Fuel increaſe not onely more numerouſly, (as a million for one) than Seeds of Corn put into the Earth, but more ſuddenly, as in a moment of time; but if Fire increaſes by the way of Production, then Flint Stones, and ſuch Sorts or Kinds of Bodies are as the Granaries or Store-houſes, for thoſe Seeds or Sparks of Fire to be kept and ſtored up for Increaſe, and for the uſe of other Creatures; but I will leave this and the like Conſiderations to thoſe that have more Experience and Obſervations, and more Learning and Subtil and Ingenious Conception than I have. Yet I rather believe, that Fire is made by Motion out of two Hard bodies pointing the ſmall Parts, ſtrucken forth of thoſe two Hard bodies, and not that Fire Lives in bright Sparks within the Flint.

CHAP. IX.

Of the Interior and Exterior Motions of Bright Shining, Hot Burning Fire.

THis ſort of Fire, which is Bright Shining, Hot Burning Fire, hath ſeveral Contractions, Attractions, Retentions, Dilatations and Expulſions in its own Interior body, from thoſe Exterior Contractions, Attractions, Retentions, Dilatations, and Expulſions, that Fire hath on other Bodies; as for the Interior Contraction of

of Fire, it is, when Fire is ſuppreſs'd by other Bodies, it Contracts within it ſelf, Knitting its own Parts into a Leſs compaſs, but when as Fire Contracts other Bodies, it thruſts forcibly thoſe Parts, that ſhould be naturally Extended, into a leſſer compaſs, than naturally they ſhould be, as from a Circumference to a Centre; but the difference is, that in Fire's Interior Contractions, they gather cloſer their own Parts Inward, but the Exterior motions of Fire on other Bodies, that cauſe other Bodies to Contract, they drive thoſe Parts of other Bodies from their fiery Bodies, and force thoſe Dilatated parts to move towards a Centre; the ſame may be ſaid for Dilatation, that the Fiery points when joyned into a Numerous body, Dilatate that Body Interiouſly into an Exterior compaſs by a free conſent, but when as fire Dilatates the Contracted parts of other Bodies, then the Fires Interior points and Exterior motions do forcibly drive thoſe Contracted parts of other Bodies to an Extended body; as for Retentions, when as Fire retains its own Interior parts, they joyn ſo cloſe, and ſtick ſo faſt one Part to an other, as they cannot eaſily be divided, or wander each Part from an other, and ſo Fire doth to other Bodies by the Exterior motions, forcing each Part of looſe Bodies to ſtick together; as for this ſort of Fire, the Interior Attractions is, when as ſome of the Fiery parts draw other Fiery parts to them by a natural Sympathy, and when that Fire attracts other Bodies, then the Fire's points

ſtick

ſtick into thoſe Bodies, and retire as to a Circumference from a Centre, but yet draw thoſe Bodies with their Retirement; and as for Fires Interior Expulſions, the fiery Points or Parts divide from each other, and when as Fire by the Exterior motion divides other Bodies into Parts, then Fire divides thoſe Bodies in Parts, as Teeth chew Meat; but this is to be obſerved of this ſort of Fire, that many of the Fiery points will Iſſue out of a Numerous body of Points ſingly, and ſo obſcurely, for when they move Singly, other Bodies more groſs than Fire obſcure their Brightneſs from our Senſe of Seeing, but not from our Senſe of Feeling, and thus by the Exterior motions of Fire divided Denſe bodies are made Rare, and Rare bodies Denſe, ſome Dilatated that ſhould be Contracted, and ſome Contracted that ſhould be Dilatated, and ſo for Retention and Expulſion; but it is to be obſerved, that Fire cannot act on ſeveral ſorts of Bodies after one and the ſame manner of way, but there are ſeveral ſorts of Fire as there are of other Creatures.

CHAP. X.

Of the Exterior Motions of ſeveral ſorts of Fire.

THe Interior and Exterior Nature, Figure, and Motions of Hot, Glowing, Burning, Bright Shining Fire, is as one without any difference,

rence, but yet the Exterior motions of this ſort of Fire work according to the Nature, Subſtance, or Body, it works on and in, for in and on ſome Bodies it works after one way, and in ſome after an other manner or way, neither doth this ſort of Fire work in Rare bodies as in Solid bodies; but it is to be obſerved, that this ſort of Fire doth indeavour to Transform moſt of what it works on to its own Likeneſs, but ſome Bodies will not be ſo transform'd, although they be diſſolved by thoſe Fiery motions, but that ſort of Fire is named a Dull or Dead fire, as is ſuch Fire, as dwells in other Bodies, as Vitriol, Cordials, Salt, or the like, which is a Condenſed fire, for this ſort of Fire, though it often dwells or is mixt with Liquid Subſtances, yet the Interior nature is made partly by Contractions, but the Interior figures is Edges or Points, which Figures are Sharp and Wounding; But this ſort of Fire hath not Power to transform other Bodies to its own Likeneſs, as the other ſort of Fire can, by reaſon, there is ſome difference in the Dead fires Exteriors and Interiors, being not Interiouſly and Exteriouſly alike, but hath ſome difference; alſo that ſort of Fire in Oyl and Sulphur is not ſo Exteriouſly burning as Salt or Vitriol, for Sulphur is only a Denſed Oyl, but this ſort of Fire is neither Exteriouſly Hot nor Burning, whereas the Vitriol fire or Cordial fire is Exteriouſly Burning, but not Exteriouſly Hot, but all ſorts of Fire are Flameable, although not Flaming, and all ſorts of Rarifying Heat are

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in the way of Burning, as Dilatations are in the way of Expulſions, yet not to produce that effect; but for theſe Dead fires, thoſe that are Volatile are compoſed more of the Hot dilatations, than thoſe that are Fix'd, and thoſe that are Fix'd are compoſed more of Hot retentions. But, to conclude this Chapter, there are as many ſorts of Fire as there are of Light, of Air, of Water, of Earth, of Vegetables, of Animals, of Minerals; but this is to be obſerved, that the Bright Shining fire is apt to Aſcend, if no other Body ſuppreſs it, and the Dead fire is apt to Deſcend, if the Bright fire doth not alter the nature, and force it to Aſcend, for of thoſe ſorts of Fire neither would be Volatile nor Flameing, did not the Bright fire give it that Motion.

CHAP. XI.

Of that ſort of Fire, that is named a Dead Fire, and the Difference betwixt that and Bright Fire.

BRight-ſhining, Hot-burning Fire is not the onely Fire, for there be many other ſorts of Fire, but one other ſort of Fire is viſible to our Senſes, as that which is named a Dead fire, which is ſuch ſort of Fire as is Vitriol, Salt, Sulphur, Spirits or Cordials, and the like; which ſort of Fire the Interior figures ſeem not to be ſo much Pointed, as Edged, and the Interior parts to be more Contracted, or rather Retained,

tained, than the other ſort of Fire, which is the Bright ſhining Fire, for the Dead fire is not ſo Agil, nor ſo Dilatating, nor ſo Wounding, as that Bright fire is; but theſe Dead fires, although they be Interiouſly hot and burning, yet not Exteriouſly hot and burning, as Bright ſhining Fires are, for that Fire is both Interiouſly and Exteriouſly hot and burning, and the Dead fire onely Interiouſly hot and burning, but yet not ſuch a ſort of Heat or Burning as the Bright fire hath, neither have thoſe Fires that are named Dead Fires thoſe General Dilating motions, or that Converting propriety as Bright fire hath, which ſhews, that the Exterior parts of Dead fire have a more Contracted and Retent body, than Bright fire hath; but the Difference of theſe two ſorts of Fire is, that the Rarity and Dilatations of Bright fire ſeem to be Exteriouſly, and the Denſity and Contractions of Bright fire Interiouſly; and the Denſity and Contractions of Dead fire ſeem to be Exteriouſly, and the Rarity and Dilatations interiouſly; that is the cauſe, that when the Exterior parts of Bright fire meet with the Interior nature of Dead fire, they agree as one Body Sympathetically, and will Incorporate in a Flame.

CHAP. XII.

Fire Produced by Exterior Motions.

SOme Exterior motions will change ſome Interior motions, as for Example, two Drie ſticks rubbed together will beget Fire, and moſt Hard bodies with Exterior rubbing or grating will become Hot, which is the next Degree unto Fire, and the Reaſon is plain, for two Bodies grating or rubbing together, is the Motion of Whetting or Grinding, ſo of Sharping and Pointing, which are the Figures and Motions of Fire, for the Fire was not Interiouſly in the Wood, but is made by an Exterior motion between two Bodies; the ſame may be ſaid of Flint-ſtones, that when Flint is ſtrucken by an other Hard body, Sparks of fire proceed therefrom; but this is to be obſerved, that two Different bodies may Cohabit or Dwell together without any diſpute of their Interior or Exterior natures, as for Example, Iron-ſtone, wherein Metall and Stone are mix'd into one Body; but many times thoſe Bodies that are Actually hot, will dwell in thoſe Bodies that are Actually cold, which is more different than Stone and Metall, as Water and Fire, as Vitriol water and the like, that is Actually cold to the Touch, and yet Actually burning to the Touch, and ſo ſome Exterior Colds and Heats may be mentioned for Examples, but for Exterior colds and Interior

rior heats, and Exterior heats and Interior colds, innumerable Examples may be given, and amongſt all Examples of Different natures compoſed into one Body, is Quick-ſilver, which is Exteriouſly Cold, Soft, Fluid and Agil, and Interiouſly Hot, Burning, Expelling, and yet Solid and Heavy; but this is to be obſerved, that the Exterior nature of Quick-ſilver makes it Active, and apt to Divide, and the Interior nature makes it Weighty and apt to Unite, the Exterior nature makes it Cold, and the Interior nature makes it Hot.

CHAP. XIII.

Of Hot and Burning Motions, and of Burning Figures.

THere are Hot motions, Burning motions, and Hot figures and Burning figures, which do not in all Creatures aſſociate together, as for Example, Oyl, the Interior figure of Oyl is the Fiery figure, yet Oyl hath not the Burning motion, unleſs ſome External fire give it that Motion, by which we may obſerve, that in Oyl, the Fiery motion is not joyned to the Fiery figure; alſo a Man in a Feaver, the Man's Interior parts are not Fiery figures, yet the Man is full of Burning motions, the like for Hot figures, and Hot motions; but moſt Creatures are indued with Hot motions, but few Creatures are indued with Fiery figures; 'Tis true, ſome Creatures are indued with Fiery figures, as

ſome Exteriouſly, and ſome Interiouſly, as Oyl is Interiouſly indued with Fiery figures, and Metall is Interiouſly indued with Fiery figures, and ſuch kind of Liquors, as Vitriol, and Strong-water, have Exteriouſly fiery Figures, and ſome ſorts of Stone are indued with Hot burning, Bright ſhining, Fiery figures; As for Hot motions, they are in a Degree to Burning motions, and Hot figures in the way to Burning figures, like as Seed ſown, or Slips ſet into the Earth, are in the way to be a Tree, a Bud in the way to be a Flower, or like as Corrûption of meat is in the way to be Maggots or Worms, but yet the Buds are not Flowers, nor the Slips Trees, nor the Seeds Herbs, Roots, Fruits, or the like.

CHAP. XIV.

Of the Nature, Motions, and Figure of Oyl.

THe Exterior parts of Oyl have Figure and Motions of VVater, as Smooth Circle-figure, and an extending Dilatating motion, but the Interior parts have the Figure of Fire, as Points, ſo that the Exterior parts cauſe Oyl to be Soft, Smooth, Fluid, Liquid, and Moiſt, but not Wet, for Oyl dilatates not to that Degree, nor in that ſort of Dilatation as to be Wet, and the difference of Oyl and Vitriol or Cordial water is, that their Exteriors are of the Figure and Motions of Fire, and their Interior parts and

and motions of the Figure and Motions of Water; but by reaſon the Fiery nature or figures are the Interior parts of Oyl, the Fiery and Flameable parts cannot be Divided or Separated from the Liquid, Fluid, Moiſt, Soft, Smooth body, unleſs it can be Condenſed into a firm Subſtance, but then the nature of being Oyl is Diſſolved or Changed, whereas the Vitriol or Cordial water may be ſeparated from the Watery body, with Diſſolving or Changing the Watery body; by which Obſervation we may perceive, that the Interior parts of Oyl are of the Nature and Figure of Fire, and the Exterior parts of Vitriol and Cordials are of the Figure and Nature of Fire; and it is to be obſerved, that the Alteration of the Interior parts of a Creature or Subſtance cauſes a Deſtruction, but not the Alteration of the Exterior parts, for the Exterior parts may be altered, and yet the Interior be as by their Nature they ſhould be; but to prove that the Interior nature of Oyl is of the Figure and Motion of Fire, is, that when as Hot burning Bright ſhining Fire takes hold of the Exterior parts, and hath diſſolved the Exterior, or hath with its Fiery points broken the Smooth Exterior Circle-compaſs, then the Interior fiery pointed Figures in Oyl are ſet at Liberty, and then thoſe Points aſcend in Parallel Lines, and ſo Dilatate into a Flame, which Dilatation cauſes Flame to be Rare and Fluid, although not Moiſt or Wet; But this is to be obſerved, that Flame is the Rareſt part of Fire, but Light is Rarer than Flame;

Flame; but to conclude this Chapter, Water, Fire, Flame and Light are all Rare and Fluid bodies in their Nature, although they may be obſtructed by other Bodies, ſo as not to Move according to their natural Proprieties, but their Rarity and Fluidity are made by Extenuations and Dilatations, although their Extenuations and Dilatations are of ſeveral ſorts; Thus we may perceive, that Water, Vitriol, Fire, Oyl, Flame and Light are Mixt bodies, or at leaſt Mixt motions in their Bodies, which produce Mixt effects; in truth, moſt Effects are of a Mixt nature.

CHAP. XV.

Of the Diviſion of Several Liquors.

AS for Salt, or Sharp, as Vitriol water, or Bitter or Burning waters, thoſe Mixtures are not part of the Interior Form, or Figure, or Motion, or Nature of Water, but onely a part of the Exterior Form, Figure and Motions, which is Dividable from the Interior form or motions; for the Interior nature of Water is to be Rare, Fluid, Moiſt, Liquid and Wet, the Interior figure of Water is to be Round, Smooth, Circular, but the Exterior parts of thoſe Round, Smooth, Circle-lines may be of divers Shapes, Forms or Figures, as alſo the Exterior motions, all which may be different from the Interior Form, Parts and Motions; as for Example, the Round,

Round, Smooth Circle-lines of Water may be Exteriouſly Flat, Edged, or Pointed, which may be altered by Exterior motions, or thoſe Exterior parts may be Divided from the Interior parts, without a Diſſolution of the Interior Nature or Propriety, Quality or Faculty of that Subſtance or Creature, named Water; The like of other Creatures; for as thoſe Exterior parts, as Flat, Edged, or Pointed figures may by Interior motions, or Exterior motions, be made Smooth or Plain, or thoſe Smooth or Plain parts may be made Flat, Edged, or Pointed, ſo they may be Divided from the Interior motions and parts, for the Salt or Vitriol may be divided from the Water, and the Water from the Salt or the Vitriol; but yet thoſe Exterior parts are as Subſtantial in themſelves as the Interior parts; as for Example, the Exterior parts of Animals, as Feet, Leggs, Thighs, Arms, Hands, Fingers, Eyes, Ears, Noſes, and the like may be divided from the Body, and yet the Animal Creature remain as an Animal Creature, that is, the Animal is not Deſtroyed by Separating ſome of the Exterior parts from the Interior; alſo ſome Interior parts, as Humors, Flegm, Choler, Melancholy, Blood, and the like; but if the Vital Interior parts ſhould be Separated, the Animal diſſolves; theſe Vital Interior parts in Animals are the Liver, Heart, Lungs, Spleen, Stomack, Guts, Brain, and the like Chief parts or fundation of the Animal; So for Water, if the Interior Circles be diſſolved or broken, it is no longer

longer Water, but if the Exterior points or edges be Altered or Separated, or Interior points or edges, which are Superfluities, be Altered or Divided from the Prime Conſiſtent parts or Body of Water, the Water will remain as Nature or Infinite matter and motions hath made it.

CHAP. XVI.

Of the Interior Figures and Motions of Metalls.

ALL Metalls are Created after the manner of Circle-figures, as Water is; but the difference is, that the Circle-figure of Metall contracts Inward, as the Circle-figure of Water dilates Outward; but this is to be obſerved, that Metall hath an Exterior ſub-dividing Propriety, which ſhews that the Exterior parts of the Circle-compaſs are Edged, ſo may the Interior parts be Edged as the Exterior parts; but the Difference between Points and Edges, although both thoſe Figures are Peircing, and Dividing, or Wounding, yet Edges are more of an United or Continued figure than Points; but to return to the diſcourſe of Metalls, all Metalls have an Interior Contracting motion, as from the Circumference to the Centre, which Contraction cauſes Metall to be of a Denſe body, but ſome Metalls are more Denſe than others, as Gold is more Denſe than Lead, but Gold ſeems

to

to be more Strongly inhabited with Retentive motions, as alſo with Contracting motions; but to prove that the Interior figure of Metall is like to the Interior figure of Water, is, that when Metall is aſſaulted by the Dilative motions in Fire, which over-power the Contracting and Retentive motions in Metalls, then Metall becomes Fluid, and floweth as Water doth, but thoſe Fiery Dilatations are named Melting of Metall. But it is to be obſerved, that it is not the nature of Metall to Flow, for the Flowing effect is Forced, and not Natural, which is the reaſon, that ſo ſoon as the Fiery Dilatations become Weak, the Contractions get the Victory, and Contract the Metall into the former Denſe body again, and ſo a Repetition may be made of Dilating and Contracting ſo long as the Interior Circle-compaſs or Lines are individed, but when the Interior Circle-lines are broken or divided, the Metall changes the nature from being Metall, and ſo much Weight or Body that Metall loſes in the Melting or Fiery furnace, ſo many Circle-lines are broken and diſſolved by Fiery Expulſions, as were in that Quantity of Metall, in which the Nature and Quality is altered or diſſolved; But ſome are of the Opinion, that the Interior nature or figure of Gold is not diſſolvable, the reaſon is, that Chymiſts finding the Interior Retentive motions in Gold, to be too ſtrong for the Expulſive motions of Fire, think it an Everlaſting Body, as being not Liable to be Diſſolved; but I

believe this Opinion amongſt ſome Men proceeds from an Impatience, in that they cannot perceive the Diſſolution ſo ſuddenly as in other Metalls, or that they cannot make a Fire ſtrong enough to Diſſolve it, or that they have not found out the True or Right way of diſſolving it; for I do verily believe, it is Diſſolvable, as all other Creatures are; in truth, it ſeems to me impoſſible, that any one Creature can be Eternally Indiſſoluble, if it hath been Created, for what hath been Made by Animate matter and motions, may be Unmade again; and certainly the Animate matter, which is Reſtleſs, will never ſuffer any one Creature to continue Eternally, no, nor any Part of Infinite matter to keep in one Figure or Form, but Chymiſts make Gold a God Unalterable; As for Quick-ſilver, the Interior nature is like Metall, which makes it Heavy, but the Exterior figure is like Water, which makes it Fluid, Soft, Agil, and Glutenous, as to be apt to Divide and Unite.

CHAP. XVII.

Of the Exterior Motions of Heat and Fire.

BUrning, Melting, Boiling, and Evaporating, are cauſed by ſeveral Fiery or Hot Dilatating and Expelling motions, I ſay Several, by reaſon all Hot and Fiery Dilatations or Expulſions are not after one and the ſame Manner or Likeneſs; beſides, thoſe Motions work according

cording to the Exterior Subſtance they work upon; as for Example, Leather doth not burn as Water doth, for Leather Contracts in the Fire before it Diſſolves, and Water Dilatates before it Diſſolves, neither doth Stone burn as Wood, and many Examples may be given, for ſome Subſtance waſtes or diſſolves in a Flame, ſome diſſolves in ſmall Sparks, and ſome diſſolves in Vapour, and ſome by inſenſible Inſpirations, and ſome Subſtances become more Denſe by Fire, and ſome more Rare before they expire, & ſome Bodies may be beyond the Fire's Expulſions, as Gold, but moſt Bodies are ſubject to Fiery expulſions, by reaſon the Figure of Fire is the moſt Wounding, Dividing, and Deſtroying figure, being extraordinary Sharp, and the Motions extraordinary Quick or Agil; but yet Fire hath an Enemy, or an Oppoſite, which is Water, in whoſe Liquid and Wet ſubſtance Fire is deſtroyed, as being quenched out. But, to conclude this Chapter, all Evaporations and Melting are by Hot dilatations, and all Hardnings, Firmings or Denſings, are by Hot contractions, and all Burnings and Diſpellings are by Hot expulſions; but this is to be obſerved, that there are Degrees of Fire.

CHAP. XVIII.

Of the Power of Water on Fire, as the Quenching out Fire.

THere is ſuch an Antipathy betwixt Water and Bright-ſhining, Hot-burning Fire, as they never meet, but Fire is in danger to be quenched out, if there be a ſufficient Quantity of Water; but it is to be obſerved, that it is not the Actual Coldneſs of Water that quencheth out Fire, for Scalding water will quench out Hot, Bright, Flaming, Burning fire; therefore it is the Wetneſs of VVater that quenches out Fire. 'Tis true, there be many Liquors that are ſubject to Burn, but there are few VVets, that have not power to Quench, and many ſorts of Flameable Liquor, as VVine, and the like, will quench out Hot, Burning, Bright, Shining fire, if enough of ſuch Liquors be flung on the Burning fire, by reaſon ſuch Liquors have more of the Watery quality or nature, than the Fiery quality or nature.

CHAP. XIX.

Of the Diſſolving of Water.

FIre doth ſeldom get the Victory of Water, but by a Proxy, as when an other Body is between Water and Fire; it is true, the Fiery

Fiery points of Hot burning, Bright ſhining Fire will divide the Watery-circle, if there be more Fire than VVater, but not upon a powerful body of VVater, for the VVetneſs of VVater doth Flat or Blunt the Fiery points, beſides, the Moiſtneſs of VVater is apt to Glue or Heal the VVounded or Broken parts of the Circle-lines as faſt as they can be Broken or Divided; beſides, the Fiery points are apt to be Intangled, and ſo incumbred in the VVatery-circles as they loſe their Force and Power, or are like Birds that are intangled in Nets, or Flies in Spider's Webs; thus, in a plain Combat, for the moſt part Water hath the Victory, unleſs there be great Odds of the Fire's ſide; but when Fire aſſaults Water by an Undermining motion, then Fire, after ſome times of Labour, gets the Better, by Hot Dilatating motions, which extends VVater beyond the Nature and Degree of the Watery Circle, yet oftentimes there is a Diſpute in their Conflict; as for Example, when as Water in a Veſſel is ſet upon Fire, the Fire under the Veſſel ſends out its Hot Dilatating motions through the Veſſel into the VVater, and there by violent ſtrength bears up ſome parts of the Water above other parts, and indeavours to Divide and Break the Water into Exterior parts, and ſo to Separate the United body, and by thoſe means to Weaken the United ſtrength, alſo to Rarifie thoſe Parts beyond the Degree of Water, but Water in its own Defence doth endeavour, ſo long as it

hath

hath Strength, to cloſe or joyn thoſe Diſſevered or Divided parts into one Body again, by the means of its Natural moiſtneſs and wetneſs; This is the cauſe of the Perturbance of Boyling water; but when as Fire doth only Rarifie water, it doth that Work by a Softer and Gentler motion, as more Inſenſible, in which Waſting condition VVater dies of a Conſumption, or Hectick Feaver, Diſſolving by degrees, and as it were Inſenſibly.

CHAP. XX.

Of the Motions that make Natural Air and Natural Light.

NAtural Air ſeems to be made by ſuch Kind of Motions, as Spiders make Cob-webs, for the Animate matter's motions Spin from a Rare degree of Inanimate matter, ſmall Lines, interweaving thoſe Lines into a Clear ſubſtance, which Thin, Clear, Spreading Subſtance or Creature, ſpreads upon and enters into moſt of the Creatures of the whole Univerſe through her Porous paſſages; alſo this ſort of Air is the Chief ſubſtance, that the Sun-beams ſpread and dilate upon, or through, I ſay upon, for the Sun-beams do not Intermix, for what is Intermixt, doth nor cannot ſuddenly Separate, beſides it would make a Confuſion between the Light and Air, inſomuch as the Light and Air would be ſo Perturbed, as all that Region or Hemiſphere would

would be of millions of ſeveral Colours, and not any Pure, Clear light, for that which makes the natural Light ſo Pure and Clear, is, that it is not of a Mixt ſubſtance, nor hath Perturbed motions in it ſelf; But it is to be obſerved, that Light and Air hath ſome Coherence in their Natures, for they are both made by Dilatations and of Lines, only Natural air and Natural light are different, in that Air is Interweaved Lines like as Spiders webs, whereas Natural light is ſtraight Parallel lines without Interweaving, but theſe Parallel lines are Smaller Lines than Air-lines, and the Subſtance much Purer than the Subſtance of the pureſt Air, and the Lines of Natural light which iſſue from the Sun, do Dilate with an Extraordinary Swiftneſs, Eveneſs, or Equalneſs, Smallneſs, and Straightneſs. But there be as many ſeveral Lights and Airs as of other Creatures, as ſome I will expreſs; for Example, as Sun-light, which I name Natural light, then fixed Stars light, then ordinary Fire-light, Meteor-light, Glow-worm light, Rotten wood-light, Cats eyes-light, Fiſh ſcales-light, and Fiſh bones-light, Diamond light; alſo there be many Reflected lights, as from the Planets, and ſeveral Lights that are not known to Men; but as for the Sun-light, or any other Light, it Shines through the Pure air, as through Tranſparent glaſs; But were not Light a Body, it would not be ſubject to Sight, for although all Bodies are not ſubject to Sight, yet Sight cannot poſſibly ſee what is not a Body, which is not

to

to be ſeen, and ſo I could ſay as well that Fire hath no Body, becauſe Light hath no Body; But this is to be obſerved, that as ſome Fires are without Light, ſo ſome Lights are without Heat; alſo Light being a very Rare body, can Dilatate and Contract with facility, and with an Extraordinary agility. But to conclude this Chapter, Light can Dilatate and Contract through the Air, and with the Air, and ſpread upon Solid bodies without Diminiſhing its Subſtance, or Altering its proper Nature, but when the Nature is altered, and the Subſtance diminiſhed or changed into ſome other Creature, it changes inviſible to our Senſe, for all Bodies or Creatures transformations are not ſubject to one Creatures one Senſe: But when as Light is Ecclipſed, it is only hindered from Dilatation, but not altered in its Nature, and when Light withdraws from a place, it leaves no Print behind it, for Light is ſo Soft and Rare, as it cannot Print, unleſs the Lines of Light be drawn or contracted into ſeveral Colours, and thoſe Colours incorporate into other Bodies; But there are ſo many ſeveral Lights, and ſome ſorts of Lights, their Natures and Proprieties, as alſo their Effects are ſo different, as it would be an Endleſs Work to treat of every Several Sort.



CHAP.

CHAP. XXI.

Of the Motions that make Darkneſs.

THe Motions that make Darkneſs are oppoſite to thoſe that make Light, for Light is Equal Parallel lines, and Swift Dilating motions, and Darkneſs is compoſed of Contracting motions, but not of ſuch Contractions as do Denſe bodies, but only ſuch, as do Darken bodies; alſo Dark motions do intangle the Lines of Light, or break thoſe Lines, or perturb thoſe Lines, and the Dark contracting motions do obſtruct the Light dilating motions, and when as Darkneſs cannot quite Deſtroy them, yet it will Darken them, making Shadows, if not Colours. But to prove there be Dark bodies made by ſuch or ſuch Motions, Dark and Black Clouds will obſcure the Sun's light, not only by Groſsneſs of the Body, but the Dark or Blackneſs of the Body, for a Thin, Dark ſubſtance will obſtruct the Bright peircing Light; but the Motions of Darkneſs ſeem to be Intermixt, or Intangled, or Troubled motions.

CHAP. XXII.

Of Shadows.

SHadows are Copies or Pictures, Drawn or Printed or Ingraven by Dark motions, which

Dark motions do Eclipſe Light; and to ſhew there are ſuch Motions as make Darkneſs, there could be no Shadows if there were not Darkneſs, nor no Darkneſs if there were not ſuch ſort of Motions to make Darkneſs.

CHAP. XXIII.

Of Shadows and Aery Figures.

SHadows are Printed or Ingraven, or Painted by thoſe Motions which make Darkneſs, upon Inlightned Air, but the Print is not ſeen, but upon a Solid Ground or Flat, as I may ſay, which Ground muſt be oppoſite to the Figure it repreſents, which is after this manner, as one Figure makes more, for the Figure makes a Figure, that is, the External motion of the External figure cuts out a Figure of Air; for queſtionleſs, whereſoever our Bodies are, there is the Figure in Air, for we are alwayes incompaſs'd about with Air, wherein we make Prints of our Figures; for the Solid bodies Print their Figures in that, which is a more Porous and Softer Subſtance, as a Seal on Wax, or a Print on Butter, or the like; thus the Solid bodies as they remove, ſtill make new Prints perpetually and infinitely, but as they remove, the Prints melt out like Verbal and Vocal Sounds, which Print Words, and ſet Notes in the Air; and the reaſon we cannot ſee the Letter in the Air, as well as hear the Sound, is, that the Air being ſo Porous,

rous; is proper onely to convey a Sound to the Ear, or to ſpread it abroad, but not Solid enough to fix the Eye thereon, having not Subſtance to hold an Object ſo long a time as to take notice thereof, unleſs it be drawn into a Shadow upon a Subſtantial ground, on which the Eye may fix; but until the Figurative be caſt upon a Solid ground, the Figures are like Sculpture, but when they are drawn in Shadows upon a Ground it is as Painting or Printing.

CHAP. XXIV.

Of Stone.

AS for Stones, I am in ſome queſtion with my ſelf, whether they are made by Cold contractions and retentions, or Hot contractions and retentions, for I obſerve, that Art will make Stone by the help of Fire, as for Example, Stone-veſſels, alſo Bricks, which are of the nature of Soft ſtone; but when I conſider of Tranſparent ſtones, they ſeem to be made rather by Cold motions than Hot, having the reſemblance of Ice; but then I conſider, that the Effects of Cold and Heat are oftentimes alike, as Hot and Cold Contractions, Retentions and Expulſions will oftentimes produce the ſame Effect, or at leaſt not much different, the like for Cold and Hot Dilatations; But I rather believe, that all ſorts of Stone are made by Hot contractions and retentions, than by Cold, for

Glaſs, that is ſomewhat of the nature of Tranſparent ſtone, is made by Fire.

CHAP. XXV.

Of Tranſparent Stones.

ALL Tranſparent ſtones, as Diamonds, Rubies, Emeralds, Cryſtal, and all other ſuch like Stones, ſeem to be made by ſuch kind of Motions as other Stones are, onely they ſeem to be made by Stronger motions, and more Pure Tempered matter; as for Example, there is great difference between Coarſe Iron and Fine Steel, yet both of one ſort of Metall; alſo there is great difference between Coarſe Powder-ſugar, and Sugar candi'd, yet both Sugar; alſo there is great difference between Pure Purſeline and Coarſe Earthen-pots, yet both ſorts are of Earth; but all Tranſparent Stones, as alſo Glaſs, is onely Calcin'd earth, and as for Tranſparent Stones, they are Calcin'd by Nature, Glaſs by Art, which is the Child of Nature; But the two chief Motions in Tranſparent Stones are Clarefactions and Denſations.

CHAP. XXVI.

Of the Load-ſtone.

ME-thinks 'tis ſtrange, that Men ſhould wonder more at the Nature of the Load-ſtone

ſtone in Attracting Iron, and in the North's Attracting of the Needle Touched with the Load-ſtone, than at the Sun's Attracting of Vapour. But ſome will ſay, that it is the Nature of Fluidity, of which Nature Vapour is one, to move with Facility, and not the Nature of Solidity, of which Nature Iron is one, which is Heavy and Slow; but I ſay, if the Attracting motions in one Body be ſtronger than the Contracting and Retentive motions in the other Body, and thoſe Figures Motions work with, be Advantagious, I ſee no reaſon, but a Fluid body may Attract a Solid body; for it is not the Subſtance of the Body that Works, or produceth Effects, but the Agility, Subtilty, or Strength of Motions, and Advantage of the Shape, ſo that the Working-power is more in Motion and Figure, than meerly the Matter; as for Example, doth not Experience prove, that Fluid Vitriol will work through Solid Metall? the reaſon is, becauſe the Expulſive motions in the Vitriol, and Sharp points, are ſtronger than the Contracting motions and Blunt edges in the Metall; but ſome will ask me, why the Load-ſtone Attracts onely Iron? Such a Queſtion I ask, why Beauty ſhould forcibly Attract the Eye? They will anſwer, by Sympathy; and I have heard, that it was the opinion of Learned men, that Sympathy had the ſame Effect betwixt the Load-ſtone and Iron, but I think it not ſo much in Sympathy as Supremacy. Beſides, it is the nature of Attracting motions, of which the Load-ſtone is

ſtrongly

ſtrongly inhabited withall, to work on that, which is Without it, as From it, not Within it, or as it were upon it, which no other Viſible Kind of Motion doth. And certainly, the Load-ſtone is compoſed of Sharp figures, yet not of ſuch Sorts as Heat or Burn, and thoſe Figures do iſſue out as Beams do from the Sun, and as they Draw the Iron, they back Return; and as the Bright beams iſſuing from the Sun, do neither Weaken nor Leſſen it, ſo the Inviſible beams that iſſue out of the Load-ſtone neither make it Leſs or Weaker; yet the Beams of the Load-ſtone do as the Sun-beams, the farther they Spread out, the leſs Strength they have to Draw; Beſides, if other Motions, which oppoſe, and are ſtronger than the Natural motions, may weaken the Strength, as Accidental maladies may weaken Animals, or Shrewd and froward weather Vegetables, or the Natural Conſiſting motions proper to that Figure, may turn to Expulſive motions, and over-power the Natural Atracting motions that iſſued therefrom. But, as I have ſaid, it ſeems the Atractive power of the Load-ſtone is ſtronger than the Iron's Retentive power, and Sharp-figures that iſſue there-from, are more advantagious than the Blunt edges in the Iron; and as the Sharp figures in Fire unknit and looſen the Contractive body of Metalls, making them Fluid, ſo the Sharp points that iſſue in Lines from the Load-ſtone faſten to Iron, Drawing it to it; And as Fire works upon Several bodies after

after a Different manner of way, according to the nature of the Body it Works on, producing divers Effects, ſo for all I can perceive, may the Load-ſtone; for certainly we do not know, nor never can come to that Knowledge, as to perceive the ſeveral Effects that are produced from the Leaſt, or as we account, the moſt Inconſiderable Creature made in Nature; So that the Load-ſtone may work as Variouſly upon ſeveral Bodies, as Fire, and produce as Various effects, although nor to our Senſe, nor after the Same manner of wayes, that Fire doth; and as Fire works Variouſly upon Various bodies, ſo there are Fires of ſeveral Sorts, and thoſe ſeveral Sorts have ſeveral Effects, yet one and the ſame Kind, but as the Cauſes in Nature are hid from us, ſo are moſt of the Effects; But to conclude my Diſcourſe, we have only found that Effect of the Load-ſtone, as to draw Iron to it, but the Attracting motion is in obſcurity, being Inviſible to the Senſe of Man, ſo that his Reaſon can only Diſcourſe, and bring Probabilities to Strengthen his Arguments, having no Perfect Knowledge in that, nor in any thing elſe; beſides, that Knowledge we have of ſeveral things, comes as it were by Chance, or by Experience, for certainly, all the Reaſon Man hath, would never have found out that one Effect of the Load-ſtone, as to draw Iron, had not Experience or Chance preſented it to us, nor the Effect of the Needle; and all the Ages before, I mean thoſe we have Records of, were Ignorant

of

of that one Effect, and perchance other Ages may find out ſome other Effects produced therefrom, which theſe Ages are Ignorant of; and as our Knowledge comes Slow, and in Parts, and Pieces, ſo we know but Parts and Pieces of every particular thing, neither is the Generality of our Senſes capable of one and the Same Knowledge; for what one Senſe knows, another Senſe is ignorant of; and queſtionleſs there are ſome things in Nature, that it is impoſſible for our Senſes to be made acquainted therewith, as being too curious for our Senſes, but not to ſome other Senſes, for certainly Nature hath as many Different Senſes, as other Works. Indeed, all things are wrought by Senſitive motions, which muſt needs Create a Senſitive Knowledge in every thing, and where Knowledge is, Reaſon is; for Knowledge is Reaſon, and Senſe is Knowledge, but Senſe and Reaſon work in ſeveral Figures, different Wayes, and not only in different Figures, but in one and the ſame Figure.

CHAP. XXVII.

Of the Needle.

I Perceive, the Norths Attraction of the Load-ſtone is not after the ſame manner of Attraction, as the Load-ſtone attracts Iron, for the Attraction of the Load-ſtone draws Iron to it, but the Attraction of the North draws the Load-ſtone

ſtone towards it, by the turning it that way, as the Sun will do the Heads of ſome ſorts of Flowers; for if the North attracted the Load-ſtone, as the Load-ſtone Iron, the Load-ſtone would be in a Perpetual motion, Travelling to the North-pole, unleſs it were Fix'd, but I do not hear that a Load-ſtone doth remove out of the place wherein it is, but it turns, as I may ſay, the Face towards it; now the queſtion will be, whether the Load-ſtone turns it Self towards the North, or the North turns by Compulſion, or by Sympathy; the Experiment will be by Iron, that if a Great quantity of Iron ſhould be laid at one ſide of the Needle, whether the Needle would not Vary from the North towards the Iron, if it do, it ſhews the Load-ſtone turns it Self towards the North, or elſe it could not turn from the North, for certainly the North hath a greater Operative Power to turn the Load-ſtone to it, than the Load-ſtone could have to turn it Self from it; So if a quantity of Iron can cauſe the Needle to Vary, it ſhews that the Load-ſtone turns to the North by a Self-motion, and not the Motions of the North that make it turn to it, but if it Varies not towards the Iron, then the North Forces it, unleſs the Load-ſtone take more delight to View the North's frowning Face, than to imbrace hard Iron, or that the Feeding Appetite is ſtronger than the Viewing Delight; for it only turns it Self to the face of the North, but if it turns not it Self, the North Forces it to turn, which as I have ſaid before, is

to be found by the Experiments of Iron; but if it turns it Self, I believe it may receive ſome Refreſhments from thoſe Raies which ſtream from the North, for all things turn with Self-ends; for certainly every thing hath Self-love, even Hard ſtones, although they ſeem Inſenſible; ſo the Load-ſtone may work as Various effects upon ſeveral Subjects as Fire, but by reaſon we have not ſo much Experience of one as the other, the Strangeneſs creates a Wonder, for the Old ſaying is, that Ignorance is the Mother of Admiration, but Fire, which produces greater Effects by Inviſible motions, yet we ſtand not at ſuch Amaze, as at the Load-ſtone, becauſe theſe Effects are Familiar unto us. But perchance the Load-ſtone is Nouriſhed by Iron, as many Creatures are by Heat, for though the Creatures are Nouriſhed therewith, yet the Heat alters not its Vertue, nor the Body in which the Heat inheres loſes not the Property of Heating, the Sun is not Weakned by Warming the Earth, though the Earth is Stronger by the Warmth of the Sun, but Warmth feeds after a Spiritual manner, not a Corporal, and as ſome things are Nouriſhed by Warmth, ſo others by Cold, as Ice, Snow, and many other things, the like may the Load-ſtone be Refreſhed, although not Fed by the Cold North; and as Fire is fed by Fuel, ſo may the Vertical part of the Load-ſtone be by Iron, as Exerciſe amongſt Animals gets Strength, ſo doth the Load-ſtone on Iron, and as Idleneſs or want of Food breeds Weakneſs and Faintneſs,

neſs, ſo doth the Load-ſtone ſeparated from Iron. But the reaſon Iron doth not move to Iron, as Iron doth to the Load-ſtone, is, that there is a Sympathy in Contrarieties, as for Example, thoſe Things or Creatures that are Cold, Seek and Adhere to thoſe Things or Creatures that are Hot, and thoſe Things or Creatures that are Hot, Seek or Adhere to thoſe Things or Creatures that are Cold, ſo that Cold creatures are Nouriſh'd by Heat, and thoſe that are Hot, are Refreſhed by Cold; thus Extreme Contraries meet in Equal Sympathies.

CHAP. XXVIII.

Of the Different Motions and Figures in the Tides, as Flowing and Ebbing of the Waters.

HUman Senſe and Reaſon may perceive, that the Tides of Waters have two Different motions at one and the ſame time, as to Dilatate one way, as in the Flow, and to Contract the other way, as in the Ebb, at one and the ſame time; alſo to have two Different figures at one and the ſame time, as to be Convex at the Head of the Tide or Overflow, and to be Concave at the Tail or End of the Full Tide, or Flow, which is the Ebb; but that which my Human ſenſe and reaſon perſwade me, that Water doth always Flow in a Convex, and Ebb in a Concave, or a Pointed line, is, that when

we fling or throw Water on the Ground, it Flows in a Half-circle in a Convex figure, and the End of the Flow is Narrow, like as the Figure of that Fruit we call a Pear, which is Round and Big at the Upper part, and Narrow and Small to the Stalk; ſo that the Concave gathers towards a Point, but being Swell'd by the fall of the Tide, it Widens and Dilatates into a Compaſs, as into a Half-circle; but to inform my Readers as well as I can of my Opinion, without diſputing according to *Copernicus*, that the Earth goeth about, and the Sun ſtands ſtill, upon which Ground I have heard that *Galilæus* ſays, the reaſon of the Ebbing and Flowing of the Sea is the Jogging of the Earth; but I have heard that the old Opinion was, that the Moon was the cauſe of the Ebb and Flow, which I can hardly believe, for mark the Tide from *Scotland* to *Marget*, when the Moon hath the ſame Influence, and this Tide is always ſo many hours in coming from *Scotland* to *Marget*; if it were the Moon, why ſhould it not be High-water or Full-tide at *Marget* and in *Scotland* at the ſame time, the Power of the Moon being all one? ſo that ſeems very improbable to me, for many things fall out at the Same time, and yet the one is not Cauſe of the other; and in Philoſophy there is nothing ſo ordinary as to miſtake the Cauſe of Things, ſince indeed the Cauſes of Things for the moſt part are Hidden from us. But ſome again will have the Sun the cauſe of the Ebbing and Flowing of the Sea;

Sea; others ſay, Heat makes Motion, and the Seas being Salt make Motion, becauſe it is Hot; but how comes it that the Freſh-waters Ebb and Flow, even Springs? But whatſoever the Cauſe be of the Sea's Motion, where it moves; for in ſome places, they ſay, it doth not; but where it moves, it is never High-water in one place, but it is Low-water in another place, and the Sea moves always Circularly; for as it is the Nature of Water to be made in Figures of Circular-lines, ſo it is the Nature to Flow Circularly, which, in my Opinion, is the reaſon of the Ebbing and Flowing Tides, that move Circularly, that is part of a Circular, where the Convex flows ſtill forward, the Flowing motion extends more and more, cauſing it to ſwell out, and the Concave ends to extend longer and cloſer, inſomuch as at laſt the Concave ends are joyned into a Convex, for it doth not extend in a perfect Round circle, as I ſhall deſcribe in my following Diſcourſe, but after an Oval, or rather a Pear-figure, but when the Flowing Convex is extended beyond the Strength, it ſtreight breaks, being moſt weak, by reaſon it is moſt Extended out, ſo that when the Tides have no more ſtrength to Flow for want of Water to Extend, and the Convex over-power'd by Extenuation, it breaks aſunder, and ſo falls back, whereby the Convex parts are now become the Concave, and where it was Concave, is now become Convex, which cauſeth it to Flow the other way, and Ebb where it did Flow; for where it lies

lies Concave, it Ebbs, and where it is Convex, it Floweth, and thus it Ebbs and Flows perpetually, where it hath free Paſſage, but the farther it Flows, the Weaker it becomes, by reaſon the ſtrength is abated, like a Horſe that hath run faſt and far, at laſt is ſo weak and breathleſs as he falls down; ſo when the Convex can Extend no farther, it breaks in two; but as the Convex Extends, the Concave ends draw Cloſer together, where by ſuch time as they come to joyn, the Convex is ſo bowingly ſtretched, as it becomes Brittle, as I may ſay, or Weak, which cauſes it to break; but it is to be obſerved, that the Tides have a Double motion, for as the Convex flows Forward, the Concave ends draw Backward at one and the ſame time, for the Extenuation of Convex one way, cauſeth the Extenuation of the Concave ends the other way; but by reaſon the two Ends draw cloſe towards a Point, the Ebbing waters ſeem Narrow and Little; but the Ebbing Tides are but an Effect of the Flowing Tides, not a Cauſe in it ſelf, for the Interior nature of Water is to Flow where it can get Liberty and Freedom of Paſſage, and where it doth not Flow, it is Obſtructed by ſome Obſcure cauſe; But I deſire my Reader not to miſtake me, as to conceive the Motion of the Tides, and the Interior nature of Water all one, being ſomething alike; but the Motions of the Tides, and the Motions of the Interior nature of Water are as Different, as the Local Motions of Animals, and their Interior nature,

nature, and I believe, if the freſh Waters had the ſame Liberty as the Sea-waters, to Flow which way they would, without Oppoſition or Obſtructions of Hills, Dales, Banks, and Walls, and had the like Quantity to move withall, I believe they would as naturally Flow as the Sea, and Ebb when their Strength fails; and I believe, if there were a ſufficient Quantity of Water in the Sea, and no Obſtructions, as Iſlands, Creeks, and the like, to hinder the Paſſage, and that the Earth were like a Billiard Ball, it would Flow perpetually Round, as the Globe turns upon the Pole, if the Pole turns not round with the Globe: But by reaſon of the ſeveral Obſtructions of Iſlands, Creeks, Rocks, and Precipices of Ice, the Sea cannot have a conſtant Force or Stream of Running round the Earth, but being broken in Parts, or Divided by theſe Obſtructions, it Flows as it were in Parts, which is to Flow, and then to fall Back in an Ebb, wanting a full Power and Strength to Flow round; for certainly it is the Nature of the Sea, if not Obſtructed, to Flow round, and not to Flow, and then to Ebb in Tides; but the cauſe of the Motion of the Sea is the Roundneſs of the Earth, and the great Quantity of the Water above it, and the cauſe of the Ebbing of the Sea in Tides, is the Obſtruction afore-mentioned, and not cauſed by the Jogging of the Earth, as ſome have Imagined, which is to my Senſe a Rough Opinion, to conceive ſo Rough and Jumping a motion of the Earth, which Turbulent and

and Uneaſie motion in my Opinion would Diſorder the Earth, and the Creatures in and upon the Earth, rather than cauſe the Tides; but if the Earth hath a Smooth Circular motion, it may cauſe the Sea to move with it in a Circular ſtream, like as a Mill-wheel in a Pond, but theſe Obſtructions I mention, hinder that free Circulation, and are the cauſe of Ebbing and Flowing, ſo that it hath neither the Strength, nor Liberty to go Round in a Smooth Stream, but is Troubled and Oppoſed. But to conclude, if the Earth had ſuch a conſtant Jogging motion, it would cauſe a Perpetual Deſcenſion and Aſcenſion of Mounts and Vallies, neither would there be any Setled and Firm ground.

CHAP. XXIX.

Deſcribing of Tides.

THe Flowing Water gathers up together like Superfluous Humours, and ſwells out the Convex, as Corrupted matter doth the Skin, and never leaves Extending till it Breaks, but it begins by the Degrees in a Demy-circle, and as it Flows, it grows Larger and Longer, extending its Compaſs; and as the Convex Extends, the Concave ends muſt of neceſſity draw Cloſer together, which makes the Ebbing waters like a Tail to the Convex, which is as the Body, which makes the Ebbing waters to be Narrow, and by the reaſon the Bulk of the Water flows

in

in the Convex, it cauſes the Concave ends to be Small, which makes it Shallow, and the more the Concave ends Extend, the Smaller they are, like Thread drawn from a full Diſtaff of Flax; for ſo the Concave ends draw or rather extend from the Convex body; but as I ſaid before, the more the Convex Extends, the Cloſer the Concave ends draw together, and when the Convex is Extended to the uttermoſt, they Joyn, and as ſoon as ever they are Joyned, and mixt together into one Point as it were, it ſwells into a Body; for the former Convex being broken, the Waters fall back to that Part, which was the Concave, but now is become the Convex, and that Part, which was the Convex, is now become the Concave, yet the Convex muſt be full, before the Concave ends extend, like as a Glaſs that muſt be filled above the Brim before it can run over.

CHAP. XXX.

Of Double-tides.

AS for Double-tides, they are cauſed when as the Convex Lines of the Flowing Tide break faſter than it can orderly Retreat, whereby they Retort back with a Double force, which cauſes a Double-tide.

CHAP. XXXI.

Of Spring-tides.

AS for Spring-tides; they are like as Natural Iſſues, that proceed from the Earth, for though the Veins of the Earth are not fill'd with Sea-water, yet the Superfluous water in the Earth may iſſue forth of the Earth, which Iſſues cauſe the ordinary Tides to Exceed both in Strength and Fulneſs, and when there are Lower Tides than ordinary, there is ſome Obſtruction, that the Obſervation of Men knows not.

CHAP. XXXII.

Of Tides and Streams Flowing againſt each other.

THe reaſon the Tides flow thorow a Stream of a Running River, is that the Tide is more Strong than the Stream, but if the Stream flows thorow the Tide, then the Stream is Stronger than the Tide, but if the Stream and Tide paſs thorow each other, as the Stream to go beyond the Tide, and the Tide beyond the Stream, then the Tide and Stream are like Duellers, which make Paſſes and Paſſages.

CHAP.

CHAP. XXXIII.

Whether the Sea run thorow the Veins of the Earth.

SOme of the Learn'd are of that Opinion, that the Veins in the Earth are fill'd from the Sea, and that the Sea-water runs thorow the Earth as thorow a Sive, or the like Porous thing, letting paſs the Rarer or Thinneſt part, and retaining back the more Solid parts, which is the Salt, which to my reaſon is not probable; for we may obſerve through Experience, that the Nature of Water is Moiſt, and Liquid, and Wet, by which Wetneſs it Draws or Intermixes ſo, as to Suck or Draw the Salt or Tincture out of Solid Subſtances or Bodies, even the moſt Solid bodies, as Minerals, which are more Hard or Denſe than the Porous earth is; and we find by Experience, that thoſe Waters which run thorow Mines, have not onely the Taſte and Tincture of thoſe Minerals they have met with, but the Purging and Opening effects, which ſhew, that the Water draws a Subſtance from the Minerals, and not the Minerals from the Water, the like from the Earth, for that VVater that runs thorow Chalky-grounds and Clay-grounds, will have the Colour and Taſte of either; alſo all Salt-meats that are laid or ſoaked in Freſh-water, the VVater becomes Salt and the Meat Freſh,

by reaſon the VVater hath drawn with the Liquid and VVet motions the Salt from out the Meat; 'tis true, Salt-water will make Freſh-meat Salt, by reaſon it enters thorow the Pores of that Spongy ſubſtance, and there remains ſo as it is, the Salt-water is in that Porous ſubſtance, for that Freſh ſubſtance hath not made the Water Freſh, but the Salt-water hath made the Meat Salt by remaining in it; By theſe Experiences we may eaſily believe, that either the Sea-water doth not run thorow the Veins of the Earth, or that it is not made Freſh by the Earth, but by the Heat in the Earth, which Diſtills, and ſo divides the Salt from the Water; but it is more probable, that the Earth is fill'd with Freſh-water of her own, which is as the Blood in the Veins, and Dews are as Sweat thorow the Pores of the Earth, and Rains are thoſe Dews turned to Vapours, and ſo into Clowds, which fall back upon the Earth, and ſo into the Earth again. But, to draw towards an end of this Chapter, if the Sea-water runs thorow the Veins of the Earth, the Sea muſt be much Bigger than the Earth, as to Feed and Nouriſh the Earth, as alſo to Feed, Nouriſh and Refreſh all the Creatures in the Earth, as alſo to ſerve its own turn to keep in a Full Sea, and to ſerve all the Sea-creatures, and to run about the Circumference of the Earth, and to feed the Air and Vapours, Winds, and the like, both VVithin the Earth, and Above the Earth; and if the Earth were Bigger than the Sea, then

then the Sea were not ſufficient to ſerve the Earth, as alſo its own Compaſs and Depth, otherwiſe they muſt be Equal, as not the Sea to be more than the Earth, or the Earth more than the Sea.

CHAP. XXXIV.

Of Nilus.

IN *Egypt*, the Sun being Hot, and that part of the Earth as is named *Egypt* having not a Sufficiency of Moiſture, for the Motions from the Sun to draw forth, the Sun becomes ſo Strong in ſuch a courſe of Time, as to draw up a Great quantity, like as a Sea, but the Strength being not able to draw up ſuch a Body of Water very High, after it hath drawn the Water ſome Heighth, as ſome Yards or Feet high, the Sun lets go his Hold by Degrees, which cauſes the Waters to fall back, or to deſcend, and then to run their former Courſe; beſides, it may be the Propriety of the Sun to have more Attractive motions on Water in thoſe Parts of the Earth at ſuch a Time of his Courſe, or Yearly Journey; but if *Nilus* proceeds from the Nature of the Water, to Flow to ſuch a part of the Earth, in ſuch a compaſs of Time as once a Year, then it is after the Nature of Natural Iſſues or Tides, of which Human ſenſe and reaſon hath not clearly found out the true cauſe, but Cauſes are not readily to be known, although it be eaſie

to

to obſerve the Effects; and as for the Cauſe of Tides, and *Nilus* overflowing, we may as well ask, why Animals breath as to draw Inward and dilatate Outward the Air and Breath in ſuch equal diſtance of Time and Motions, as why the Water Ebbs and Flows at ſuch conſtant times.

CHAP. XXXV.

Of the Divided Parts of Water, and ſeveral External Motions.

WAter being of a Rare and Porous body, is apt to Divide into ſeveral Parts, as into ſeveral Drops, which Drops are Round, according to the proper Nature of Water, being compoſed of round Circle-lines; but as Water is apt to Divide in Parts, ſo thoſe Parts are apt to Unite together, for as the Rarity and Sponginеſs makes it apt to Diſſever, ſo the VVetneſs and Rarity makes thoſe Parts apt to Joyn and Stick together, or to Intermix together; alſo the Rarity makes Water Fluid, and Rarity and Fluidity is cauſed by Extenuating motions; But, to conclude this Chapter, as Human ſenſe and reaſon may perceive and obſerve, that Interior and Creating motions are divers in every Creature, ſo the Exterior motions, as for Example, of the Exterior motions of Water, which are after divers and ſeveral manners of Ways and Motions, as Flowing, Ebbing, Streaming, Spreading, Running, Circling, VVav-

VVaving, Furling, Folding, Curling, Riſing, Falling, Springing, Dropping, Showring or Raining, which is falling in long ſtraight Lines, or Chains of drops, either Intermixt drops, or Joyn'd drops; alſo the ſeveral Dilatations, as into Vapour, Air, or Wind; alſo it will Contract into Snow, Hail, Froſt, and Ice, and millions of other Motions, that will be too tedious to Expreſs, and millions of Motions, that Human ſenſe and reaſon cannot Expreſs, and as for Water, ſo the like of all other Creatures.

CHAP. XXXVI.

Of Rain.

VVAter is apt to fall down by the Weightineſs, for the ſeveral Drops or Parts of Water ſticking cloſe through the Wet quality or propriety, thoſe Parts joyn cloſe together, or intermix ſo one into an other, as they cauſe Weightineſs, for though the nature of Water is Rare, and the Animate motions are Extenuations, yet the Combining of the Parts of Water is Contraction, and ſo Denſation, and ſo becomes Heavy, ſo that the Interior motions make it Rare and Light, but the Exterior motions make it Denſe and Heavy, ſo that VVater by the Animate nature and motions is apt to Diſperſe, and to Aſcend into Vapour, and by the Exterior motions to Unite and Deſcend into Rain, thus VVater aſcends in Vapour, unites

unites in Clouds, and falls down in Showers of Rain.

CHAP. XXXVII.

Of External Figures, and Internal Forms.

IN ſome Creatures there is ſuch a Sympathy betwixt the Internal Form, and External Figure, as the Alteration of the one, Changes the Nature of the other; as for Fire, when as the External figure is Altered, the Internal faculty or propriety or nature is Deſtroyed; by which it is to be obſerved, that the Interior nature of Fire depends upon the Exterior figure; but as for Water, the External figure may be Changed or Altered, and the Interior nature not Altered, as we may obſerve when it is Frozen or Congealed into Ice, Hail, or Snow, then the Exterior figure of Water is Changed, but not the Interior nature, for when the Water is Unfrozen, the Water will be, as it was, before it was Frozen, by which we may obſerve, that the Interior nature of Water doth not depend upon the Exterior figure; as for Animals, their Exterior figures are not ſo United to the Interior nature as Fire, as to Diſſolve one with the other, nor ſo Pliant as Water, as to Change and Re-change from one Exterior figure to an other Exterior figure, neither do the Exterior figures of Animals ſuddenly Diſſolve with the Interior nature, for the Exterior figure of a Dead man is as it

it was when he was Alive, but after the Interior nature is diſſolved in Animals, the Exterior figure diſſolves by Degrees.

CHAP. XXXVIII.

Of Metamorphoſed Elements.

AS I have formerly mentioned the Creating motions of Earth, Water, Air, and Fire, now I will Diſcourſe of the Alterative motions, or the Transforming motions, as alſo the Deſtroying motions of the Looſe parts of the Elemental bodies; I begin with the Transforming motions of ſome of the Looſe parts of Earth; the Natural motions are Attractive, Contractive, and Retentive, when as thoſe Motions alter from Contractive to Dilative, or that other Motions in other Creatures intermix and Over-power the Natural motions, they alter the Exterior figure, and many times the Interior nature; but as for the Alteration of Earth, when as the Dilatating motions have Power over the Contracting motions, or the Rarifying motions over the Denſing motions, Dilatating and Extending motions cauſe the Contractions in the ſolid Earth to let go their Strength, and by Degrees cauſe them to quit their Power, and then the Dilatations become Strong, and Dilatate the Solid Earth to a Porous and Spongy body, as from Earth to Mud, from Mud to Slime, and from Slime to Water, which Water is ſome-

what more than the Middle degree of Extenuations or Dilatations, which Dilatations have brought or wrought Flat matter of Earth into a Round circle, which before was a Lump or Ball of Earth, but if the Dilatations work beyond the Degree of VVater, which is to be Liquid and Wet, then they Extend from Water to Vapour, from Vapour to Air, from Air to Fire, for as the Circumferent lines Extend, they become Smaller, and the Matter to be more Rare, as to be more Rare than the Degree of Water, or the Propriety of Wet requires, and ſo becomes Vapour, which is leſs Wet and more Rare than Water, for Water in ſuch a Degree of Circle Extenuations, Dilatations, or Rarifications, as to produce ſuch a Subſtance to be Fluid, Moiſt, Liquid, and Wet, but beyond ſuch a Degree it becomes leſs Wet as before that Degree, to be more and more Wet; but as I ſaid, beyond the Degree of Water it becomes Vapour, from the Degree of Vapour it Extends, and is ſo Rarified, as to be Air, and from the Degree of Air it Extends ſo far as the Circumferent Lines become ſo Small with Extenſions, as they become as Sharp as an Edge of a Knife, or ſuch a thing, ſo as that Degree is next to the nature of Fire, as to have the Heat of Fire, for though the Degree is not beyond Air, yet the Air is Sulphury Hot; but it is to be obſerved, that this Sort of Air is like to Seething or Boyling water, for it is a Moiſt heat, like as a Sweating heat, and the reaſon is, that though the

Watery

VVatery circles are extended to an Airy ſubſtance, yet they are not Diſſolved, but if thoſe Circle-lines extend farther, or more than the Quantity of Matter will afford or allow to give a Compaſs, thoſe Lines being extended very Small, break into Pointed parts, for the Smalneſs of the Line cauſes the Figure of Points, when it is divided in Parts, and then the Interior nature and Lines are Diſſolved, but if they extend not to a Diſſolution, thoſe Lines may Contract from the outmoſt Extenſion back to the former Degrees, as to return from Thin, Hot, Moiſt Air, to Thicker Air, from Thicker or Groſſer Air to Vapour, from Vapour to Water, from VVater to Slime, from Slime to Mud, from Mud to Solid Earth; for as it did Dilatate, Extenuate and Rarifie, ſo in the Return it Contracts and Denſifies; but this is to be obſerved, that according as thoſe Motions are Slower or Agiler, ſo is the Alteration; alſo it is to be obſerved, that ſometimes one Degree or Change will laſt Longer than the other Degrees, and ſometimes ſome Degrees or Alterations change Sooner, and ſometimes thoſe Subſtances of theſe Metamorphoſed Elements Diſſolve in their Several changes, if other Figures, Creatures or Motions do oppoſe them; but theſe Metamorphoſed Elements are Increaſable and Decreaſable, as many other Creatures are, and when the Interior nature is Altered, the Subſtance Diſſolves into other Creatures.

CHAP. XXXIX.

Of thoſe Motions or Figures, that turn Water to Snow, Hail, Ice and Froſt.

WAter being of a Soft, Fluid, Liquid, Moiſt, VVet ſubſtance, and being compoſed of a Circle-figure, is more pliant, and apt to be moved or wrought upon, than any other Creature or Subſtance, which is the reaſon that Cold and Hot motions ſeldom ſuffer Water to live in peace or reſt, but often Transform and Metamorphoſe Water into ſeveral Shapes, and ſeveral Exterior figures; as for Cold contractions, they Draw, VVind, Twiſt, and Pull in the VVatery lines, and Circle-figure many ſeveral ways, making Water into Snow, Hail, Ice, and the like, for when Cold contractions make Water Snow, they draw the Circle-lines of Water in Triangular figures, and when Cold Contracting motions make Water Ice, then they draw the Watery circles in Square figures, and when the Cold Contracting motions make Water Hail, 'tis made into a Lump or Heap-figure, for in Hail, the Circle-lines of Water are twiſted and wound about on a Heap, or Hail ſeems to be made by drawing the Water-circles by a Round Circular motion into a Cloſe Contracted Body, and when Cold contractions do freez Dew, which is Water, they Surfle the Water-circles,

circles, which makes them Exteriouſly Rough or Uneven; for though Surfling is in the manner of a Round contraction, yet they draw onely the Parts to be Uneven; thus the Water-circles and Compaſs may be drawn from Round to Triangular, or from Round to Parallel, or from Round to many other ſeveral Figures, I will not ſay, by a Mathematical rule, but certainly Nature is beyond Art. Some may put the Queſtion, why I ſhould imagine that Ice, Hail, Snow and Froſt, is made by ſuch Motions into ſuch Figures? My Anſwer is, that I obſerving the Nature of Dry cold, and the Nature of Moiſt and Liquid water, and the ſeveral Changes and Shapes of Transform'd water, it doth appear probable to my Human ſenſe and reaſon, that Ice, Hail, Snow and Froſt ſhould be made according to my former Deſcription. But, to conclude this Chapter, when the Hot dilatations are more Powerful than the Cold contractions, they extend the Watery-circles into their Natural figure and compaſs again.

CHAP. XL.

Why Snow is Rougher and Lighter than Ice or Hail.

THe reaſon, Snow is Lighter and more Rough than Hail or Ice, is, that Snow being of a Triangular figure, which is a Figure where the Lines are not Straight, nor the Points

Equal

Equal in number, for Triangular-lines are Slope-lines, and the Points are Odd in number, whereas Square-figures have four Straight lines, and a juſt number of Points, and a Parallel line Straight, and two Equal ends or points; But a Triangular figure is not ſo, for though Three be a Plural number, it is an Odd number, as Two and a Single one, and a Triangular-figure being Uneven, cauſes it to be unſteady, not being Equally poiſed; beſides, a Triangular figure cannot be ſo Compact or ſo United as any other Figure, which hinders that Figure from being Condenſed into ſo Solid a Body as the Square or Round figure may be, and the Leſs a Body is Condenſed, the Lighter the Body is, and the More a Body is Denſed, the Heavier a Body is; but there be ſeveral Denſities and Rarities, where ſome are Heavier than others, and ſome Lighter than others, according to the Degrees and Temperaments of ſeveral Subſtances, for the Nature of ſome Subſtance may alter the VVeight as much as the Motions can do, for there is great difference between the nature of VVater, Fire, Light and Air, and yet they have all Rare bodies; alſo there may be great difference between Several waters, Several airs, Several fires, Several lights, and the like; alſo there may be difference of Denſing motions, and Rarifying motions, as ſome Denſing motions may be VVeaker, ſome Stronger, ſome Swifter, and ſome Slower than others; the like for Rarifying motions.

CHAP.

CHAP. XLI.

Of Colours.

AS for Colours, there are Natural Colours, Accidental Colours, and Artificial Colours: Natural Colours are ſuch as are Proper to each Kind, as alſo to each Sort of Creatures, as the Different Colours of the Several Elements, Minerals, Animals, and Vegetables; Accidental Colours are Metamorphoſed Light or Air, or ſome Sorts of Looſe and Rare Matter cauſed by Several Motions; Artificial Colours are made by Several Mixtures of Several Subſtances, and Several Motions. But this is to be obſerved, that all Colours in all Sorts or Kinds are made by Several Contracting Motions; alſo it is to be obſerved, that the Natural Colours of Minerals are more Various and Different than thoſe of Elements, and the Natural Colours of Animals more Various and Different than thoſe of Minerals, and the Natural Colours of Vegetables more Various and Different than thoſe of Animals. Some are of an Opinion, that Colour is made onely by Light, but how can one and the Same Light make ſo many Several Colours as belong to every Kind and Sort of Creatures? Or how can Light be the Cauſe, that a Parrot is one Kind of a Pie-colour'd Bird, and a Peacock another Kind of a Pied

Pied Bird, whoſe Colours are not cauſed by Light but by Nature? otherwiſe, if a Horſe get a Foal of his own Colour, it cannot truly be ſaid, the Horſe is the Cauſe of the Foal's Colour, but the Light, which is Ridiculous, and many Examples might be given to Croſs this Opinion. But by reaſon ſome Colours are made by Perturbed Light, ſome Men have an Opinion, that all Colours are made that way; but ſuch Colours as are Inherent, Light onely ſhews them to the Eye, but doth not make them in their Subſtance, for Graſs is Green, whether the Eye ſeeth it or not, as much in the Night as in the Day, and the Darkneſs of the Night doth onely Obſcure Colours, not Alter their Inherent Nature: for no Man can in Reaſon ſay, that the Sun is not of the Colour of Fire, when as a Dark and Black Cloud Obſcures it.

But Natural and Inherent Colours are made thus: Motion making Lines of the moſt Facil Subſtance of a Creature, Contracts thoſe Lines into Several Works or Figures, and according as thoſe Lines are Drawn into ſuch and ſuch Figures, they cauſe ſuch and ſuch Colours; as for Example, when thoſe Lines are Drawn or Contracted into ſuch a Figure, it is Red, when into ſuch a Figure, Blew, into ſuch a Figure, Yellow, into ſuch a Figure, Green; and when thoſe Lines are Contracted partly into the Figure of Red, and partly into the Figure of Blew, it makes a Figure of Purple; and if they

they be Contracted partly into the Figure of Red, and Partly into the Figure of Blew, and partly into the Figure of Purple, it makes a Fourth Figure, which is a Fourth Colour, and ſo by the Intermixing of Several Figures, there may be made Infinite Colours; Likewiſe one and the Same Figure which is one Perfect Colour, may vary with each Particular Figure, which is a Particular Colour, and according as the Figures Differ, the Colours Change or Alter. As for Shadows of Colours, they are in my Opinion produced after this following manner: The Figure of Blew is one Perfect Colour, and the Figure of Red another Perfect Colour, but being Mixt, they make a Mixt colour; alſo Blew and Yellow make a Different Mixt colour from Blew and Red, and Blew and Green a Different colour from Blew and Yellow, and ſo we may Match Figures of Colours until a Man be Weary, but whatſoever hath Conſtantly one and the Same Figure in the Several or Single parts of other Figures, which are other Colours, produces Shadows in Colours, as Blew and Green, Blew and Red, Blew and Yellow, and the like, appear in Shadows of Colours, by reaſon one Particular figure of ſuch a Particular colour is the Ground-work, that is the Ground figure, which is the Ground colour, and makes all the Figures and Colours, it is mixt with, to be partly of its own Ground-figure and Colour, and according as there is

More or Leſs Mixture, the Shadows are Fainter or Stronger, and according as thoſe Figures are Leſs or More Contracted, the Colours are Deeper or Paler, for thoſe Colours, whoſe Figures are Cloſer contracted, and Rougher wrought, are the Darkeſt colours as neareſt to Black, and thoſe Colours, whoſe Figures are the Looſeſt and moſt at Liberty, are the Lighteſt or Paleſt, and thoſe Figures of Colours that are made of the Pureſt Subſtance, and moſt Exactly Wrought with the Smalleſt Lines, produce the Brighteſt Colours.

Some ſay, Colours are made by Perturbed or Obſtructed Light, but in my Opinion they are rather Broken Lines of Light, for if it were Perturbed Light, like as Over-agitated Air, or Troubled and Rough Waters, the Light would be onely Darker or Groſſer; 'Tis true, thoſe Perturbed motions may be the cauſe many times of Breaking the Light, which Broken parts Contracting into Several figures cauſe Several colours, every Particular figure being a Several work, and when thoſe Several figures are Intermixed with each other, they cauſe Intermixed colours, for the Several figures made of the Pieces of Light are the cauſe of Several colours, and not thoſe Pieces of Light without thoſe Figures, for if thoſe Lines of Light were not Contracted into Several figures, they could not make Colours; but if Airy Colours are not made by Broken lines of Light, but of Whole lines,

lines, then ſuch Colours are made by Contracting the Straight Unbroken lines of Light and Air, which Contraction turns Light or Air into Colours, as Contraction doth Water into Snow, Ice, Hail, and Froſt; But it is to be obſerved, that it is not onely the Contracting motions, that make the Difference, but being Contracted into ſuch or ſuch Figures, as for Example, when the Water-circle is Contracted into ſuch a Figure, it is Snow, when into ſuch a Figure, Ice, into ſuch a Figure, Hail; ſo when the Lines of Light are Contracted into ſuch a Figure, it is Red, into ſuch a Figure, Blew, into ſuch a Figure, Yellow, and when the Figures are Intermixt, there are Mixt colours.

But I will conclude this Chapter of Colours with an Anſwer to Two Queſtions, the Firſt is, Whether all Creatures ſee all Objects alike? My Anſwer is, that if the Sight be Perfect, and without Imperfection, they do, but if the Sight be Imperfect, either by Nature or Accident, or be Over-powered, they do not, for a Squint-ſight ſeeth Double, a Dazled ſight ſeeth Glimmering, and a Dying ſight ſeeth Fading, and many other Examples might be mentioned, concerning the Alteration of Sight, but Particulars are no Objection againſt the General, for ſurely an Eye is Nature's Preſs, to Print all Outward Objects that are Preſented to it, the like are all the reſt of the Senſes, nevertheleſs there may be Falſe or Defective Preſſes

or Prints made by Error or Imperfection. Another Queſtion is, Whether Colour be in the Eye, or in the Object, or in the Air? My Anſwer is, Colour may be made in All, as well in the Object, Air, and Eye, as for Example, the Colour of Graſs is in the Object, and when the Object meets with the Eye, both the Form and the Colour of the Graſs is Printed in the Eye, alſo the Several Colours made by Perturbed light are in the Air, but if thoſe Colours meet in the Diſtance of the Eye, the ſame Colours are Printed in the Eye; alſo Colours may be made in the Eye without the Help of Outward Objects, as in Dreams, or by a Blow on the Eye, or in a Frenſy, or in the Entrance into a Swoon, and many other ways, which would be too Tedious to Relate.

CHAP. LXII.

Of Airy Figures.

AS I ſaid before, the Solid bodies moving in the Soft and more Porous bodies, make many Figures therein, ſome as Printed, ſome as Painted, others as Sculpture, as Cut, or Carved, in Wood or Stone, or Caſt in Metall, or Moulded in Earth, ſome are as if a Man, or the like Creature, ſhould Print themſelves in Snow, others

others as if they ſhould make themſelves in Snow; as for Example, as if a Man ſhould ſtand, and let the Snow fall thick upon him until he were all covered over, there would be his Figure in Snow, or if he ſhould lie down in Snow, there would be his Print; ſo it is in Air, as we move from Place to Place, new Figures are made, and the former Figures Moulder or Melt out; but according as the Air is, ſo they Laſt, or Decay, for if the Air be Congealed with Cold, Thickned with Groſs Fogs or Miſt, the Figures laſt the Longer therein, although in a miſhapen Poſture, like ruinated Buildings, or broken Statues, or like defeated Armies, here an Arm, or a piece of an Arm, or a Hand, and there Legs, here a Head, there a mangled Body; but when the Air is Thin and Serene, the Print Diſſolves as ſoon as the Figure Removes, and if the Air were as Solid as Snow, we ſhould ſee the Figures as perfect in the one as in the other; but the Air being very Thin and Porous, the Sight of the Eye runs thorow without ſtay or ſtop, taking no notice, like Water in a Sive, wherein nought can be contained, becauſe there is no hold to keep the Water in from running out.

CHAP. XLIII.

Of Several ſorts of Vapors.

THere are many ſorts of Vapors, according to the ſeveral Temperaments of thoſe ſe-

veral Parts of Earth they are Attracted from by other Creatures or Subſtances, or Dilatated forth of each Part or Parts of Earth; but it is to be obſerved, that many Several ſorts of Vapors, when they are Drawn, or Aſcend to ſuch a Degree of Heighth, they all Intermix or Joyn together, yet ſeldom ſo Equally, but that ſome one ſort doth Predominate over the reſt, whether Salt vapor, or Sharp, as Vitriol vapor, or Oyly, or Sulphury, or Bitumenous, or Freſh wateriſh, or Groſs earthy, Heavy, or Light and Airy; but from theſe Several ſorts of Vapors may proceed Clowds, Rains, Snow, Hail, Wind, Lightning, Thunder, Meteors, and the like, made by Several motions on thoſe Several vapors; and as there are Several vapors proceeding from the Body of the Earth, ſo there are ſeveral other Vapors, from ſeveral other Creatures, eſpecially Animals and Vegetables, all which Vapors are Rarer parts than Water, but not ſo Rare as Air or Fire; but as for Animals and Vegetables, as there is a Natural heat, and a Natural moiſture, Proper and Inherent in all Animals and Vegetables, ſo there is a Natural vapor produced between each, as between the Heat and Moiſture, and by ſuch Motions as make Vapor, but the Inherent Heat, Moiſture and Vapor in Animals, are made by the Vital and Radical Heat, Moiſture and Vapour.

CHAP.

CHAP. XLIV.

Of the Agreement and Diſagreement of Fire and Wind.

HUman ſenſe and reaſon may obſerve, that Wind is ſomewhat of the Nature of Fire, which ſtrives to Diſſipate all things it meets or encounters with, and not onely ſo, but even to Diſſipate its own Matter, by indeavouring to Spread it ſelf over all Subſtance or Matter it doth encounter; this is the cauſe of the Sympathy between Wind and Fire, for the Motions in Wind do aſſiſt the Motions of Fire, as for Example, when as Fire is applied to Wood, or any other the like Matter, when as the Fire hath not Force or Power enough to Rivet, Wedge, or Peirce, or Thruſt in its Fiery points into that Matter it meets with, the Wind lends the Fire Force, like as an Hammer doth to Nails, ſo the Wind Beats in the Fiery points into the Denſe wood or other Oppoſing matter; alſo Wind doth help to Spread the Fire into the Several parts of the Oppoſite matter; thus Wind doth lend Fire Force; but this is to be obſerved, that Wind and Fire doth as two great Monarchs, which Help and aſſiſt each other at firſt in their weak condition, but afterward they ſtrive to Deſtroy each other, as ſtriving which ſhall be Abſolute; for Wind after it hath holpen the Fire to Kindle, then to Burn, indeavours

to

to Dissipate both Fuel and Fire, for if the Wind can Dissipate the Fuel, it must needs Dissipate the Fire in the Fuel, for when the Fuel is Dissipated, the Fire Dies, having nothing to Feed or Live on; as for Example, a Man with his Breath, which is Wind, can blow Out the Flame of a Candle, and with his Breath can blow In the Flame again, that is, when he blows his Wind gently, he blows out only the Flame, as the Thinnest and Weakest part of Fire and Fuel, and when he gently or softly blows his Wind on the Substance of the Fire and Fuel, as the Snuff or Wick of the Candle, his Wind doth only Dilate the Fiery Substance, that is, the Rare or Thinner parts thereof, into a Flame again, but if the VVind be too strong for the Nature of Dilatation, the VVinds force Over-powers the Fires force, and Dissipates and Disperses the Ground, Substance, or Substantial ground of the Fires Increase or Continuance, which is the Fuel, as the VVick or Snuff of the Candle, the like for Grosser bodies, than the Snuffs of Candles are.

CHAP. XLV.

The Difference of Cold and Hot Winds and Vapours.

THe Difference of Cold and Hot Winds or Vapours, is made only by the Alteration or Change of Motions; as for a Proof, when as a Man

Man Breathes upon his Hand, it feels Warm, and when a Man Blows upon his Hand, it feels Cold, the reaſon is, that ſome ſorts of Dilatations make Heat, and ſome ſorts of Contractions make Cold, for when a Man breathes upon his Hand, he opens his Mouth and Lips wide, through which his Breath Dilatates and Spreads abroad, but when as a Man blows upon his Hand, then he draws his Mouth and Lips into a Narrow Compaſs, which Contracts the Breath into a Cold Wind, as the opening of the Mouth and Lips doth Dilate the Breath into a Warm Vapour; by this we may perceive, that ſeveral Motions make one and the ſame Thing from the ſame Paſſages, to Work and Cauſe two ſeveral Effects; wherefore Senſe and reaſon may perceive, that Sharp, Cold Winds, or Cold Vapours, are made by Contraction, for ſure, thoſe Winds that are Sharp and Cold, their Paſſage, from whence they iſſue out is Narrow, for though Wind may be made by Dilatating motions, yet that Wind may be Contracted after it is made, as by ſeveral Paſſages or Places, for Narrow Paſſages or Places may Contract ſeveral ſorts of Temperaments or Subſtances; but this is to be obſerved, that Contraction of Paſſages cauſes Narrow, Long, and Pointed figures, in the Vent or Iſſuing forth, and Round in the Compaſs of the Figure, like Pins, Needles, Straws, Thorns, and the like, whereas Broad Paſſages give Room and Liberty to the Nature of the Subſtance that paſſes thorow; this is the

cauſe

cauſe that Cold winds are Sharp, Pricking, Piercing and Dividing as Sharp Pointed Figures are, ſo that Burning Heats and Sharp Colds have a Reſemblance.

CHAP. XLVI.

Of Wind.

WInd is wrought by Expulſive motions, and the Strength doth not proceed from the Thickneſs or Solidity of the Body, as many think it doth, conceiving it to be Contracted, or Preſt-up Air, which if it were, it could not enter into ſuch Small Porous and Narrow Paſſages as it doth; Wherefore, me-thinks the Strength ſhould not proceed ſo much from the Solidity as the Agilneſs therein; for the quick Repetition doth ſo forcibly Preſs on each other, as upon neceſſity it muſt drive all Looſe and Porous Bodies before it, but the farther it Blows, the Fainter is the Breath, for as the Repetitions grow Short, ſo Weaker; But as Wind is made by Dilatations, ſo it Divides by Expulſions.

CHAP. XLVII.

Of the Noiſe of Tempeſt and Storms.

AS I have ſaid, that Sort of Air, which is made by VVatery-circles, is apt to Sound with

with every Motion that ſtrikes thereon, by reaſon of the Hollow figure being Spherical. Likewiſe, this is the reaſon, Running Brooks make a Murmuring Noiſe; alſo this is the reaſon, that the Tides do make ſuch a Noiſe in the Ebbs and Flows, Circles preſſing or rather ſtriking each other. Again, this is the reaſon, the Winds, when they Blow upon Airy or Watry-circles, by ſtriking thoſe Spherical circles cauſe it to Sound, and make a Roaring Noiſe by the Confuſion it makes therein, for Wind, which is an Expulſive Vapour, doth not only ſtrike thoſe Watry-circles, but thoſe that are Extended into Air, and when thoſe Motions drive Circle againſt Circle, or Circle upon Circle, it makes ſuch quick Re-bound, which Re-bounds in Contracting and Croſſing each other, make a confuſed Sound, which we call Tempeſtuous and Stormy; and it is to be obſerved, that a Tempeſt in the Air, and a Storm in the Water, and Thunder, is much after one and the ſame kind of Noiſe; but as Thunder is cauſed by the Expulſion of the moſt Extended Circular lines, ſo Wind is the Expulſion of the more Groſſer circles, as when Lines break, which are Extended no farther than to Vapour; alſo theſe Expulſions, if they be not very Violent, cauſe Rain, for the Expelled motion being no ſtronger than to Preſs upon the Unbroken and Extended circles, either of Vapour or Air, drives it into the Watry compaſs, but when the Weather is Cloudy, it is not altogether ſo Hard Preſt upon,

as to drive it into Perfect Water-circles, but to the next Degree as a Thick Vapour; and when the Weather is Inconstant, as we say, that is, some times Gross and Thick, and then it will be straight, Clear and Bright, is as the Pressure doth Abate or Increase, but unforced Rains, as I may call them, which is without a Violent constraint, is, when those Circles are drawn into a Watry compass in a Natural order, and by the Natural weight, being Thicker than Natural air, that is, Original air, and not Transformed water, it falls down on the Earth; Likewise the pouring Showers make a Sound, by the force of the falling Drops, striking as they fall, but by reason the Water is divided by the Falling motions into Less bodies as it were, which makes not so strong a Sound, having less Compass, as the Tides, or Air having fewer Circles in a Body, as in Drops, which makes it of a less Bulk, and the Less the Body is, the Weaker and the Smaller is the Sound; but when the Watry lines are drawn into a Triangular figure of Snow, it falls silently without Sound, by reason the Watry line is drawn out of the Extended circle; Besides, that Figure is the Lightest Figure, by reason of the Inequality, for a Square hath four Equal parts, which makes a Just number, so an Equal ballance, which gives it a Steddy weight, and a Circle is Equally round from a Centre without Parts, which gives a Steddy weight, but a Triangular figure is in three Parts, which is no Just number, nor Equal ballance,

lance, nor Steady weight, which makes it of leſs Force, for being a Wavering figure, it cannot Preſs hard, nor Strike ſtrongly, nor Fall heavy, but Flies lightly about.

CHAP. XLVIII.

Of Thunder and Lightning.

THunder and Lightning are cauſed from Watry circles, for when they are extended from Water to Vapor, from Vapor to Air, from Temperate air to Hot air, from Hot air to Fire, if thoſe Circles be extended beyond the compaſs and ſtrength of the Line, they Break, which is the cauſe of Thunder and Lightning, for as ſoon as the fartheſt Extenſion of the Circle is Broken, thoſe Extended parts do with an Extraordinary Swift motion Run, or rather Shoot forth into Bright Flaming flaſhes, as Spinning lines of Light, but when thoſe Lines extend with a Great ſtrength, they break into Small parts, which cauſes Thunder to follow Lightnings; for thoſe Breaking parts ſometimes Expulſe diſorderly, Beating and Striking upon thoſe Circle-lines that are Unbroken, which Circles, being of a Porous, Compaſs'd, or Arched figure, cauſe a Sound in the Higher Region, whereto they are Aſcended, for their Extenſion cauſes them to be Light, their Lightneſs to Aſcend; but all Round figures being Concave within, and Convex without, do pre-

ſent to the Ear, if they be ſtrong, as Concave and Convex glaſſes do Objects, when preſented to the Eye; thus Round figures cauſe a Hollow ſound, if they be ſtruck, for the Concave draws thoſe Motions in which are made Rebounds from ſide to ſide, and the Rebounds continue the Sound by the Eccho repeated, for Sound laſts longer in Hollow figures than in any other, and though I will not ſay, that onely Hollow figures make Sounds, yet I ſay, that no Sound can enter but through Porous figures, as the Ear is a Hollow figure, and the Ear is not onely Hollow but Circular, but Sounds are made in the Ear, or rather Enter, as Light and Colours in the Eyes, for Diſcord is Perturbed motion, or rather Cloſe Antipathetical motions, and Harmony are Sympathetical and Regular motions; but the more of theſe Extenuating circles break, the more Lightning there is, and the Stronger they Break, the more Thunder there is, and the Harder they ſtrike upon the Unbroken circles, the Louder is the Sound; but if the Circle-lines break onely aſunder, and Extend, or Shoot forth into Straight lines without more Parts, there is onely Lightning without Thunder, but if thoſe Lines break into more Parts, there is Thunder alſo; and when there falls Rain at thoſe times of Thunder, it is when the Gentler motions of ſome of thoſe Expulſed parts do not ſtrike Hard upon ſome of thoſe Unbroken circles, but Preſs upon them, which cauſes them to drive into a Leſs circle,

and

and a Groſſer line, until they return into the Watry compaſs, where growing too Heavy for the Heighth, fall down towards the Centre of the Earth, as all Heavy bodies, if not Thick bodies under to bear them up, or Stronger motions than their Weight to hold them up; Thus in my Opinion is Thunder and Lightning cauſed, and when it Rains, thoſe Unbroken circles turn into their Nature again.

CHAP. XLIX.

The Difference of Salt-water and Freſh-water.

THe Difference of Salt and Freſh-water is, that Salt waters Circle-lines are Flat and Edged, as a Knife, or the like, and in Freſh-water Round, which Edge makes it not leſs Smooth, although more Sharp, nor hinders the Extenuating compaſs, but the Lines being Flat, make it more Solid, and ſo give it more Strength, then the Freſh-water Circle that is Round, which makes it more Porous than Salt-water is, by the Experience of an Egg, and the like, which in Freſh-water will ſink to the bottom, but very Salt-water will bear it up from ſinking, and according to the Strength, it will bear More or Leſs; but theſe Lines may Exteriouſly alter from Flat to Round, and Round to Flat, and never alter the Interior nature, as to break the Compaſs, which is to Diſſolve the

the Circle or Ring, as I may ſay, which Circle-ring is the Interior figure; but if Salt-water be Diſtilled it becomes Freſh, for that Art takes off the Edge.

CHAP. L.

Of the Alterations of Motions.

ONe and the ſame Degree of Animate matter may Change and Re-change the Natural Poſture and Motion in one and the ſame Figure, but a General alteration of thoſe Motions Proper to that Figure, Diſſolves the Natural form of any one Particular figure, for a Figure moving by ſeveral Motions, proper to its Kind, muſt joyntly conſent either by a Sympathy or Inforcement, to make a Diſſolution as well as a Creation, but all Motions Work or Alter according as the Matter is, or Figure they Work on, or forced by Stronger motions to alter their Natural courſe; likewiſe Several and Contrary motions may work by Turns in one and the ſame Figure, by one and the ſame Degree of Animate matter.

CHAP. LI.

Of the Local Motions of Water, Air, and Fire.

I Perceive there be other Figures that have Local motions, beſides Animals, yet it is partly

partly their Figures that are proper thereto; for though there is no Matter, but is Figured, yet all Figures move not of Themſelves, and though all Figures are Moved or Moving, or both Moved and Moving, yet all Local motions move not after one and the ſame manner; but I here mean by Local motion, that which Naturally can move from place to place by its Interior nature, and Exterior ſhape, but if the Word be not right to the Senſe, pray Pardon it, and take the Senſe and leave the Word, and Chriſten it a New; but theſe Kinds of Local figures are Water, Air, and Fire, which Move after an Animal manner, although they have not the Shape of thoſe we call Animals, yet they ſeem Animals by their Self-motion, as Moving from place to place, unleſs they be ſtopt by ſtronger Motions, or other Figures that are more Powerfull; the like of other Animals; as for Example, if one Man or more being Stronger, bind an other Man which hath not Strength nor Power to oppoſe or hinder them, he cannot Move according to the Property of his Nature and Shape. So likewiſe, if Cold Contractions be more Powerfull than the Extenuating Circles, it binds up the VVater with Icy Fetters, whereby it cannot Move according to the Nature, nor Circular ſhape; So if any Man ſhould go to a Place, and a High wall ſhould ſtand betwixt him and that Place, he cannot paſs unleſs there were a Paſſage, or that he can Clamber, which muſt be by Art, becauſe there is no Footing, and to Jump over it he

he cannot, for it is ſo High that the Weight of his Body will Pull him down, before the Strength or Agilneſs of his Limbs ſhall Raiſe him over, and he cannot Flee over, by reaſon his Shape is not fitted thereto, having no Wings; ſo Water being ſtopt, and the Paſſage hindered by a thick Bank of Earth, cannot Move according to its Property; for it is proper for Water to move Deſcendingly, at leaſt Straight forth; but when it Aſcends, it is forced by other more Powerfull motions; So likewiſe it is proper for Air to move after a Level, Streaming, or Spreading manner; for Fire, to Aſcend after a Peircing, Shooting, and Perpendicular manner, for theſe Elements do as other Animals do, for Man, Beaſts, Birds, Fiſhes, their Local motions are Different according to their Shapes, for it is the Property of a four-legged Creature to Gallop, Trot, Pace, Run, Leap, but they cannot Flee, becauſe their Shape is not fitted thereto, having no Wings; nor a Bird cannot Gallop, Trot, nor Pace, having not four Leggs to make Changes therewith; it is true, a two Legged Creature may Leap, Jump, Hop and Run; likewiſe thoſe Fiſhes can neither Run nor Flee, that have not VVings nor Leggs; but thoſe that have Mixt Shapes, have Mixt Local motions, as there be Fleeing Fiſhes, and Swimming Birds, and Running Fiſhes, and Swimming Beaſts; Indeed, moſt Creatures can Swim, for moſt Shapes are fitted thereto in one Kind or another, but Mans Shape is ſuch, as it can imitate moſt Various motions,

tions, though it is the Shape that makes them move Locally, but there muſt be ſuch an Interior nature proper to ſuch Shapes, as Vegetables and Minerals, their Property is not to move Locally, that is, to have a Self Exterior motion; It ſeems there Interior nature and Exterior ſhape is not proper thereto, or perchance it is only their Exterior ſhape, and not their Interior nature, that makes them unfit to Move ſo, for we find their Interior nature to be more Active, than many of the Exterior ſhapes of Animals. But to return to thoſe Elements, I treat of, as firſt Water, the Interior nature cauſeth it to be Liquid and Wet, the Exterior ſhape to be Fluid, both Agreeing by a Sympathetical Conjunction, give a Local motion to Deſcend, and Bear all before it, or with it, that is Looſe and Unfix'd; So Fire, the Interior nature cauſes it to be Hot and Dry, the Exterior figure to be Sharp to Burn, both Agreeing by a Sympathetical Conjunction, giving it a Local motion to Peirce and Divide all it can enter into, if not Over-power'd; So Air, the Interior nature cauſeth it to be Soft and Pliant, and the Exterior figure to be Thin and Searching, both Agreeing by a Sympathetical Conjunction, give it a Local motion to enter through all Porous bodies in a Level line, and to fill up all Vacant places in other Figures, unleſs it be Thruſt out, and Kept out by ſome thing more Powerfull. It is the Natural propriety for Bright Shining Fire to be Hot and Dry, to be Sharp and Burning, to move Aſcending; and

for Water, to be Liquid, Fluid, and Wet, and to Deſcend in a Deſcending line; and Air to be Soft and Yielding, to be Thin and Searching, to Move in a Level line, unleſs they be forc'd other wayes; for Fire may be ſuppreſs'd Downwards, and Water forced Upwards, and Air diſpers'd; and Fire is not only ſubject to be Suppreſt, but Quenched out; for Water, if there be a ſufficient Quantity to the Fire, on which it is Caſt, will Over-power it; for the Innate motions, which cauſe Water to be Wet, deſtroy the Motions that cauſe Fire to be Sharp and Burning, and the Figure being Deſtroyed, that is, Diſuniting thoſe Parts, and thoſe Motions, that Keep and Maintain thoſe Parts in that Figure, the Property is Extinguiſhed too, as we ſee many Animal figures do to one another, and Birds and Fiſh, and Men, deſtroy Beaſts, Birds, and Fiſh, according as they have Strength, Power, and Advantage; for indeed the Diſſolution of one Figure is the Cauſe of the Creation of another; ſometimes the Materials of One figure make Many figures, and ſometimes the Materials of Many figures make but One figure; and an Animal figure hath many ſeveral manners of moving Locally, and the Elements, as other Animals, do move ſometimes Slower, and ſometimes Faſter.

CHAP.

CHAP. LII.

Of the Motions of the Sun and Planets.

THe Sun, and the reſt of the Planets are queſtionleſs Created as other Animal creatures, and their Local motions are according to the Shape, as we ſee all Animals are; for a Worm cannot Run, but onely moves by Gathering up the Body from one place, and then Stretching it ſelf out farther, or elſe by Rolling, and Winding his Body from place to place, nor Beaſts cannot Flee as Birds, nor Birds cannot Trot, Amble, nor Gallop, as Beaſts, becauſe they have no Shape fitted thereto; for Birds want Four legs to Pace and Gallop, and Beaſts want Wings to Flee: So the Planets move according to their Shape, turning about as a Spherical circle about a Centre; and if the Sun runs about the World with ſuch Speed, as ſome Old Opinions are, it muſt turn as a Wheel about the Spoak, or Rundle as a Bowl in the Ecliptick-line; but if the Sun, as ſome Modern Opinions hold, doth not move out of his place, but is, as it were, Fixed, and that the Planets move about it in Circular ways, according to their Shape, then the Motions of the Sun are onely by Dilatation and Attraction, from which Light and Heat proceeds, and Vapor is drawn or ſuckt up.

CHAP. LIII.

All Heat is not onely Inherent in the Sun.

'TIs not the Motion of the Sun that makes the Bowels of the Earth Hot, nor the Abſence of the Sun that makes it Cold, but ſuch Matter and Motions that make Fire and Heat in the Earth, and ſuch Motions and Matter that make the Earth Cold; As for Example, Vaults or Cellars are Cold when the Surface of the Earth is Sultry hot, which ſhews, that the Sun doth not peirce his Fiery Beams or Heat ſo deep as a Cellar, much leſs can he peirce into the Bowels or Centre of the Earth; alſo in the Suns Abſence, as in Night, the Air will be many times Hotter than in the Day; alſo in Winter, low Vaults will be very Warm, and ſometimes Hot; alſo ſome Days will be Colder, and ſome Hotter, although the Sun be in one and the ſame Degree; This ſhews, that it is ſuch and ſuch Motions in ſuch and ſuch Temperament, that makes Heat, Cold, Burning and Freezing, which Cauſes or Motions are in Infinite matter, and not bound to one Particular Part or Creature, although ſome Particular Creature or Part may be more ſtrongly indued with ſome Particular motions than other Creatures or Parts.

CHAP. LIV.

Of the Sun.

IT ſeems to Human ſenſe and reaſon, that the Sun is a Globe or a Body of Fire, without any Mixture of any other Element or Creature; for were the Sun Mixt with any other Element, than its own Matter or Subſtance, the Effects of the Sun would not be ſo Diſtinct and Conſtant as they are; for Several ſorts of Mixtures would cauſe Several ſorts of Effects, and more Divers Changes and Alterations, than ſeem to be in the Sun; but what Fiery and Illuminated ſubſtance that the Sun is compoſed of, is not to be gueſt at in Human ſenſe and reaſon, as whether it be a Rare or a Denſed ſubſtance, or whether the Subſtance be Increaſable or Decreaſable, or whether the Subſtance be Nouriſhed From or By other Creatures or Elements, or Conſiſt and Subſiſt Of and In it ſelf; but it is probable, that the Body and Subſtance of the Sun doth Conſiſt and Subſiſt In and Of it ſelf, more than other Elements, I mean, of it ſelf as a Single creature, not being Mix'd with the Several temperaments and Several creatures of the other Planets, but hath no other Mixtures but what belongs to its own Proper Element, nor is troubled with other Inherent motions, than what belongs to its own Proper Figure, and that which makes the Opinion probable, is, that the Sun never Changeth

Changeth his Heat, nor Leſſens his Light, nor Alters his Nature or Proprieties, nor Changes his uſual Motions of Attracting, Contracting, Dilating, Diſſipating, Illuminating, Rarifying, Clarifying, and Conſtant motions in Spherical or Circle-lines; but though it be probable, that the Sun is a Purer Element in it ſelf than other Elements, yet the Sun Trades and Traffick with other Elements, or rather other Elements Trade and Traffick with the Sun, and other Elements do oftentimes Obſtruct the Sun, as Dark clowds will obſtruct the Sun's light, and Vapours and Wind will abate the Heat of the Sun's Rays; for though they can neither Quench out the Natural heat, nor Put out the Natural light of the Sun, yet they will, as we obſerve, obſtruct the Sun's Effects, although not the Cauſe. But, to conclude this Chapter, although the Sun ſeems to be a more Purer Element than the other Planets, and that it requires leſs Trade or Traffick with other Elements than other Elements do with the Sun, yet we ſee, there is Trade and Traffick with all the Elements, and there muſt be Trade and Traffick amongſt all the Creatures in Infinite matter, becauſe Matter and Motion is Infinite. As for the External motions and effects of the Sun, they are Divers and Different, for the External motions are Contracting, Dilatating, Uniting, Diſperſing, Diſgeſting, Retentive, Expelling, Illuminating, Reflecting, Exhaling, Nouriſhing, Burning, Deſtroying, and Millions that are too tedious to relate.

CHAP.

CHAP. LV.

Of the Moon.

AS the Sun ſeems to be a World, Globe, or Body of Fire, that is, of ſuch Subſtance and Motions, as cauſe the Effect of Fire, ſo the Moon ſeems to be a World, Globe, or Body of Water, and the ſeveral Changes are as the Ebbing and Flowing of the Watery Globe, which makes the Circle of the Moon to be Fuller ſometimes on one ſide than an other, but we could not obſerve or perceive the Ebb or Flow were it not for the Light of the Sun; and when it is High-tide, we ſay it is Full Moon, and when it is Low or Ebb, it is in the Wane, and as the Tide increaſes or decreaſes to or from our Hemiſphere, we ſay it is in the firſt, ſecond, or third Quarter; and if we do, we may obſerve, that the Light which the Sun caſts or lends the Moon, is juſt ſuch Light, as we name a Wateriſh light, that is, a pale Silver light, for Moonlight is like ſuch Light, as when the Sun ſhines on Water; And it is to be obſerved, that the Moon ſeems More or Leſs light, as that ſide next the Sun is Swell'd fuller, or Ebbed lower; and the Conſtant changes, are like as the Conſtant tides of the Sea, which cauſes Men to believe, it is the Moon which cauſes the Tides of the Sea, but the Learn'd men ſay, the Moon is a Body of Earth, or an Earthy Body, the reaſon

ſon of their Opinion is, that they can ſee through a Perſpective Glaſs, that there be Inequalities in the Moon, which they imagine to be Mountains, Rocks, Hills and Dales, and ſuch like things; but it may be anſwer'd, that what they ſee by or through their Perſpective Glaſs, is only the Reflexion or Image of the Earth we Inhabit, and not the Subſtance of the Moon, like as we ſee our Image in a Pond or Pail of water, ſo we ſee Mountains, Hills and Vallies in the VVatery face or VVatery body of the Moon; But ſome will ſay, this Opinion may be Contradicted in the Eclipſe of the Sun, for if the Moon were all Water, it could not Shadow the Sun from the Earth, by reaſon the Sun would Shine thorow it; but this will not prove a ſufficient Contradiction, for a little Watery Cloud will ſhadow the Bright Sun, wherefore ſo Great and Thick a Body of VVater as the Moon, when it interpoſeth it Self between the Sun and Earth, muſt needs Darken and Eclipſe the Sun's Light and Body; and as for the Reflexion of the Earth, the Deeper and Fuller the Body of Water is, the more Perfect it Repreſents the Figures or Images that are oppoſite to it. But to conclude this Chapter, as the Sun hath the Motions and Effects of Fire, ſo the Moon hath the Motions and Effects of Water, and I cannot perceive in Human ſenſe and reaſon, but that there may be Worlds, Globes, or Bodies of Water, as well as of Fire, and of Fire as well as of Earth, and Worlds of Air as well

as

as VVorlds or Globes of Fire, VVater, and Earth; As for the other Planets, if they be Bodies of Earth, ſurely they are not of ſo Groſs a Subſtance of Earth as this we Inhabit, but are of a more Pure and Refined Earthy Subſtance, ſo as there is as much difference as between Porcelain and Ordinary Earth: But this is to be obſerved, that the External motions and effects of the Moon are Dilations and Overflows.

CHAP. LVI.

Of the Planets.

TO the Conceivement of Human ſenſe and reaſon, the Sun is a Fiery Globe or World, or a Globe of Fire, the Moon is a Globe or World of Water, and ſo is the Star named *Venus*, the other Planets are Globes of Air and Earth; now the Queſtion will be, whether theſe Globes or Bodies be Pure of themſelves, as having no Mixtures, as not being intermixt with other Creatures, as the Globe of the Earth we inhabit is, having innumerous ſeveral Creatures Created and Produced within it, and partly of it; but Human ſenſe and reaſon cannot poſſibly reſolve this queſtion, becauſe thoſe VVorlds or Bodies, as the Planets, are not ſubject to the Knowledge of Human ſenſe and reaſon, but yet Human ſenſe and reaſon may and doth perceive ſo much, as to know that there is Commerce and Traffick between and amongſt theſe

VVorlds, Globes, or Bodies that are named Planets. But to conclude this Chapter, thoſe Planets are Bodies which are Pure, as only of one Subſtance, as being Single Creatures without mixture of other Creatures, either for Creation or Habitation, but their Intercourſe is as Paſſengers, or Travellers, not as Inhabitors.

CHAP. LVII.

All Creatures are Intermixed or Joyned, or have Commerce with each other.

THere is not one Creature whatſoever, but is either Intermixt or Joyn'd, or Commerces or hath Intercourſe with other Creatures, yet the Intermixing which is moſt difficult to be Separated or Divided, is Separable or Dividable in Nature without each others Deſtruction, yet Nature cannot Divide the Inherent figure or form of any one Creature, without a Diſſolution of that particular Creature, for though Nature which is Animate motion, can Divide ſeveral Creatures Intermixt, yet it cannot Divide one and the ſame Intire Creature, which it hath made, without a Diſſolution, but thoſe Creatures, that only are Joyned, or have only Commerce, are more eaſily Divided, but thoſe Creatures, whoſe Intire and Innate figures or forms are Intermixt, the Animate motions cannot Divide without a Diſſolution of the Creature commixt of two or more Sorts; as for Example,

ample, a Mule, which is a Mixt ſort of Creature, as between a Horſe and an Aſs, Animate motion cannot Divide each Sort without the Deſtruction of the whole Creature; but for ſuch Intermixtures, where their ~~Animated~~ interior forms or figures are not Intermixt, thoſe may be Separated without a Total deſtruction of either Bodies, Forms, Figures, or Natures; as for Example, Vitriol and Salt from Water, and Water from each; as alſo ſome ſorts of Heats from ſome ſorts of Bodies, alſo ſeveral Parts from ſeveral Bodies, and yet not Deſtroy the Interior nature; as for Example, that Creature, named Man, may have all his Exterior parts, as Hands, Arms, Leggs, Noſe, Lips, Eyes, and the like, divided from the Body, and the Interior Nature, Parts and Motion remain Perfect, according to his Nature and Property; The like for other Animals, as alſo Vegetables, and ſo for all Creatures, according to their Kinds and Several Sorts.

CHAP. LVIII.

Of the Temper of the Four Seaſons of the Year, as Spring, Summer, Autumn, and Winter.

TO Diſcourſe of ſeveral Seaſons of the Year, which is divided into Four Parts, as the Winter, Spring, Summer, and Autumn, is eaſie, but to diſcourſe of the Several Changes, and Temper of the Weather or Elements, and

every Day or Hour, is not to be done; the like for the Temper of Mens Bodies or Minds, which are as Changeable; but for the ſeveral Seaſons, the Sun cauſes Different effects, as for the Winter, the Sun, or Sun's Rays, having not that Powerful heat, as it hath in the Summer, by reaſon the Sun is more Oblique, or at a Farther diſtance from that Region or Part of the Earth, where Winter is; for the Diſtance of the Sun cauſes Winter, which Diſtance cauſes his Heat to be ſo Weak, as it cannot Clarifie or Purifie the Groſs vapours, that ariſe from the face of the Earth, or thoſe that are made in the Lower Region of the Element of Air, which cauſes the Air to be Thick and Groſs; alſo it cauſeth Clowds and Rain, and the Climat or Region being Cold for want of the Sun's Near Preſence, cauſes Froſt and Snow, for the Sun's Abſence, Diſtance, and Weakneſs gives a Freedom for the Cold motions to work more Powerful; but in the Spring, upon the Sun's Return, there ariſes a Diſpute between the Hot motion proceeding from the Sun, and the Cold motions in the other Elements or Planets, which cauſes the Elements not to be Conſtant, but Various, ſome Days will be Fair Sunſhining Days, ſome Days Clowdy and Rainy, and ſome Days Froſt and Snow, and ſometimes in one Day it will be Fair, Clowdy, Rain, Snow, Freez and Thaw, all in the compaſs of fourteen or fifteen hours, ſuch Diſpute will be amongſt the Motions and Tempers of the Elements;

but

but when as the Sun hath gain'd the Power from the Leſs Elements, he hath a free Acceſs to the Earth, whom he Imbraces, Warms, Comforts, and Co-operates, and begets Young Creatures; but the Sun, the Nearer he comes, the Stronger is his Heat, and from a Comfortable heat he becomes Burning hot, in which Degree he is an abſolute Conqueror of all Exterior Cold motions, Separating and Vanquiſhing all Cold Tempers and Motions in the Looſe Elements with Thunder and Lightning, but after his Strength is ſpent, he begins to Retire, which Retiring time is Autumn, in which time he begins to loſe his Strength, and ſo his Effects become Weak by Degrees, by which the Cold temper and motions of Cold elements become more Strong by Degrees, and in the Winter ſeaſon they are in full Power; But the Sun Attracts more Vapors in the Spring than his Heat can Diſgeſt, which falling back upon the Earth half concocted, cauſe many Diſeaſes amongſt Animals, and Deſtruction of young ſpruting Vegetables, as alſo the Inconſtancies of Weather. As for the Summer, the Sun being Perpendicular, or near that Degree, his Fiery points or motions peirce into all thoſe Creatures they can take hold of, as alſo Inflame the Air ſo much, as it Burns and Diſſolves many Creatures; for the Rare Air being full of Hot Fiery motions, Intermix with the Rare Vital ſpirits of other Creatures, by which Mixture they are Deſtroyed, becoming Unnaturally Hot and Burning,

ing, but in the Autumn, when the Sun retires, he leaves the Air and Elements VVell and Equally Tempered; for if the Animal creatures of the Earth be Diſeaſed or Die, thoſe Diſeaſes, or Diſtempers, or Deaths, are not ſo much cauſed by his Motions or Effects on their Bodies, as by their Exceſs of Luxurious feeding of the Delicious fruits of the Earth in this Seaſon; but this is to be obſerved, that the Autumn is Warmer than the Spring, although he be in the Equal degrees of his Motions, and Heighth or Diſtance; the Reaſon is, that the Earth in the Seaſon of Autumn is like to the Hearth of a Chimney, which after a Great fire will retain a VVarm heat a Long time after, and in the Seaſon of the Spring the Earth is like a Chimney-hearth, that hath not had Fire on it of many months, where the Hearth of the Chimney will require ſome Conſtant time of Fire, before it be throughly Heated, or Hot; and this is the Reaſon that the Spring is Colder than the Autumn, alſo that the Air and Earth is Coldeſt juſt before the Opening of the Day, or Approach of the Sun's Light, than any time of the former part of the Night, becauſe the Sun hath been Abſent all Night; for though at ſome times, ſome Nights will be very Hot, yet that Heat proceeds rather from the Natural heat from the Bowels of the Earth, than from the Natural heat from the Rays of the Sun; for the Body of the Earth hath a Natural heat as well as the Body of the Sun hath, and when as both

their

their Heats dilatate from each others Bodies, and Meet and Intermix together, the Medium becomes insufferably Hot to those Creatures, that Live upon the Face of the Earth, or in the Air; But it is to be observed, that when as Cold Vapours issue from the Earth, they allay the Hot influences or Effects of the Sun.

CHAP. LIX.

Motion doth not Work in all Creatures Exactly.

THe Animate matter and motions do not alwayes Work or Move Exactly, either in Forming or Shaping of several Creatures bodies, or Moving Exactly in every Particular Mind; as for the Body of that Creature named Man, the Proportion of every Line or Lineaments, for some have Well-shap'd Hands, Faces, Leggs, Feet, and Ill-shaped Bodies, and some have Well-shaped Bodies, and Ill-featured Faces, and some have Exact featured Faces, and Foul complexions; Thus some have one Part of the Body ill-shaped, and the rest well-shap'd, and some Part of the Body well-shap'd, and the rest of the Body ill-shap'd; and as for the Body, so for the Mind, for some have Clear Understandings, and yet Cloudy Judgments, and some have Subtil Conceptions, and Weak Memories, and some have Ready Memories, and no Fancies, and many the like Examples may be given. Likewise some have very Handsome bodies,

bodies, and Deformed minds, and ſome Excellent tempered and Exact Moving minds, and Deform'd bodies. By theſe Examples, Human ſenſe and reaſon may perceive, that the Animate motions do not at all Times and in all Creatures Work or Move either Induſtriouſly or Exactly, for ſome Times, and in ſome Bodies, and in ſome Minds, the Senſitive and Rational motions ſeem Laſie at the beginning of Creation, or Idle in the midſt of their Works, or ſeem Tired before the finiſhing of a Creature. Thus motion moves ſometimes Slowly, ſometimes Careleſly, ſometimes Falſly, or Erroneouſly. But it ſeems to Human ſenſe and reaſon, that the Cauſe, that Animate motion Moves or Works ſo Imperfectly, as ſeldome to Form any one Creature Exactly, is, that Infinite motion hath Infinite matter to Divide and Compoſe into Infinite figures, which requires Infinite of times, ſo that Motion hath not Spare time as to Move or to Work ſo Curiouſly, as to Shape and Form every particular Part of every particular Creature ſo Exactly, as to Form them Mathematically or Geometrically, ſo as when any Creature is ſo Exact, as no Fault can be found, it ſeems rather a Work by Chance, than any Deſign in Motion to Work ſo Exactly; But to conclude this Chapter, it would be a Thing or Work above Nature, and to be Accounted a Miracle, if any Creature ſhould be made ſo Exact as ſomewhat were not amiſs either in Body or Mind.

THE

THE PREFACE OF THE SIXTH PART,

To all Learned PHYSICIANS.

Moſt Reverend and Grave Fathers of Health,

I PRESENT this Work unto your Sage Judgments, your Prudent Practices, your Great Experiences, your Studious Obſervations, your Miraculous Cures, and Humbly lay it on the Tables of your Studies, in Hope, ſome Spare Time may invite you to read therein. I dare not Commend it, leſt you ſhould Diſprove it; for as your Wiſdoms Value it, ſo it is Good or Bad.

I am to be Pardoned, if I have not the Names and Terms that the Anatomiſts Have or Uſe; or if I have Miſtaken ſome Parts in the Body, or

Misplaced any; for truly, I never Read of Anatomy, nor never saw any Man Opened, much less Dissected, which for my Better Understanding I would have done; but I found, that neither the Courage of Nature, nor the Modesty of my Sex would Permit me. Wherefore it would be a great Chance, even to a Wonder, I should not Err in some; but I have seen the Intrals of Beasts, but never as they are Placed in their Bodies, but as they are Cut out to be Dresst, and in the Shambles; and perchance I have seen, passing by the Shambles, a Cruel Butcher cut the Throat of a Beast, or Rip up the Body, where the Guts and Garbage did burst out; but that gave me not much more Knowledge, not seeing how they Lay in their Bodies. And though it is a Usual Custom for Ladies and Women of Quality, after the Hunting of a Deer, to stand by, until they are Ript up, that they might Wash their Hands in the Blood, supposing it will make them White, yet I never did it; but, as I have said before, I have seen the Intrals of Beasts out of their Bodies, which Intrals, I have heard, are much like a Man's, especially a Hogs, so that I know, Man hath a Brain, a Heart, a Stomach, Liver, Lungs, Splene, and the like; yet these I never Viewed with a Curious and Searching Eye, but as they have Lain in some Vessels; and as for Bones, Nerves, Muscles, Veins, and the like, I know not how they are Placed in the Body, but as I have gathered Several Times from Several Relations or Discourses, here a Bit, and there a Crum of Knowledge,

Knowledge, which my Natural Reason hath put together, of which Meat my Wit, like an Unexperienc'd Cook, hath ventured to Dreſs; if it Pleaſes the Palats of my Readers, I ſhall account my Time not Loſt; if not, it is not the firſt Diſh of Good Meat that hath been Diſguſted.

This part of my Book, which Treats of Diſeaſes, is to Expreſs, what Irregular Motions and Miſtemperaments make ſeveral Diſeaſes, as alſo the Ground and Fundamental Diſeaſes that are Incident to Man's Body; but I ſhall not trouble you in this Book with many Phyſical Rules, or Cures of Diet, or Medicine, but ſome few I ſhall mention: The truth is, ſuch Treatments are Improper for this Book; beſides, they require a Whole Volume by themſelves; But my Chief Deſign in this Book is onely to Treat of ſome Particular Diſeaſes, which are moſt Common, and Ordinary amongſt Mankind, but as for the Pratice and Cures, I leave them to Phyſicians.

PHILOSOPHY.

PART VI.

CHAP. I.

Of the Motion of the Body.

PHyſicians ſhould Study the Motions of the Body, as natural Philoſophers Study the Motions of the Heavens, for Several Diſeaſes have Several Motions, and if they were well Watched, and Weighed, and Obſerved, they might eaſily be Found out Severally; and as they take Compaſs of the Heaven, and Stand upon the Earth, ſo theſe may take the Degrees of the Diſeaſe, although they Diſſect not the Body. Thus natural Phyſicians may know, when the Sun of Health will be Eclipſed by the Shadow of Melancholy, which gets betwixt the Body and Health; And natural Phyſicians may come to know the Thoughts, as they the Stars, by Studying the Humors of Men, and may know what

what Influences they may have upon the Body, and may know the ſeveral Changes of their Humor, as they the ſeveral Changes of the Moon, that the ſeveral Changes of the Humor cauſe the Blood to Ebb and to Flow, as the Tides of the Sea; Thus they may make an Almanack of the Body, for to ſhew what Weather and Seaſons there will be, as great Tempeſts and Storms of Wind-colick; whether there will fall upon the Lungs great Rheums, as Showers of Rain, or whether there may be Great and Hot Fevers, or whether there will be Earthquakes of Shaking-Agues or Cold, and Numb-Palſies, or whether there will be Dearths of Fleſh, and ſo leave Bones Bare by the Droughts of Hectick Fevers, or whether the Over-flowing of Moiſture, which cauſes Dropſies. Thus, if we could find the Several Motions in Several Diſeaſes in a Body, as ſurely might be done by Obſervations, and Study, and could find out the Several Motions by the Several Operations in Phyſick, we might ſurely ſo Apply them together, as to make Animals, though not Live Eternally, yet very Long; And truly, I think this Book of Philoſophical and Phyſical opinions, may give great Light to this Study. Phyſicians muſt firſt take care in their Preſcriptions, to prevent Errors of miſtake, before they Apply Remedies to Cure.

CHAP.

CHAP. II.

Of the Frame of Man's Body.

I will first Discourse of the Orderly course of Nature, which is, to have a Perfect Shape, according to the Kind, or Sort of Figure it was Created to, that is, like an House to be Well Built; Next, to have it Strong and Firm; Thirdly, to have it Commodious; Fourthly, to have it Well Furnished; Fifthly, to have it Clean from Dirt or Rubbish; Sixthly, to Keep it in Repair; Seventhly, to Prop it from Falling down with Old age, the Pulling it down by some Evil accident, or Burning it by Fevers, or the like, or Drowning it by Dropsies. And though I may Similize it to any Figure, yet I only imploy it to Mankind, that is, to have a Perfect and Upright Shape, a Clear Strength, Sound Parts, Plump and Fat, Clean from Gross Humours and Obstructions, to Keep it Healthfull with Wholesome Food, to Help Nature with Cordials or Physick, Death being the Destruction.

CHAP. III.

Of Natural Self-tyranny.

MOtion doth not only Divide matter Infinite, but Disturb matter Infinite; for Self-

Self-motion Striving and Strugling with Self-motion, puts it Self to Pain; and of all Kind of Motions, the Animal motions Disturb most, being most Busie, as making VVarrs and Divisions, not only Animal figures against Animal figures, but each Figure in it Self by Discontents and Dislike, which Discontent makes more Pain, than Ease or Pleasure, or Tranquillity, by reason of Irregularity; but Motion is an Infinite and Eternal Tyrant on Infinite figures, for as Motion makes Figures, so Motion dissolves Figures, which makes Infinite and Eternal matter Eternally Restless; for the Extract of Infinite matter, which is an Animated matter, which Animate matter is Self-motion, and makes the Inanimate part of matter so Restless too by Working thereon. Thus the Only and Infinite matter is a Tyrant to it Self, or rather I may say, Infinite is a Tyrant to Motion, and Motion to Figure, and Eternity to all. For though Infinite, Eternal matter, Motion, and Figure are Individable, yet they are all as Separated in Aspiring; for Motion, although it is but an Effect of Matter, yet strives for Absolute Power over Matter and Figures; and Infiniteness strives for the Absoluteness and Power over Matter, Motion and Figure; and Eternity strives for Absolute Power over all. Thus the Effects strive, to have Power over the Prime Causes, which is the Only matter; for if there were no Matter, there could be no Figure, nor Motion, nor Infinite, nor Everlasting; the like do the Minor

effects

effects over the Minor causes, for Effects are Causes of Effects.

CHAP. IV.

Of the Understanding, Sense, and Reason.

THere is no Sense without Reason, nor no Reason without Sense, and if Sense and Reason are not General throughout Infinite matter in Infinite Creatures, it is a Particular gift from something, which is Transcending the Infinite matter, which is Infinite nature, as God, a Deity; but if Reason be a Particular gift to some Particular Creature, as namely Man, Nature, or the God of Nature, would prove both Partial and Finite; as for Infinite Nature, she seems to be Inconfin'd, and for the God of Nature, He can have no Bias.

CHAP. V.

The Two Ground-Motions in the Rational Animate Matter.

THe Rational Animate matter moves, as it were, Two ways, for it hath Different motions, Internal and External, like as the Sensitive matter, which moves the Inanimate part of Matter Internally and Externally, according to the Nature of each Figure; as for Example, the Creating of a Figure is One way, and the Several

ral Actions of the Created is another way; the like doth the Rational Animate matter, it firſt Runs into Figures, and then Moves Figuratively; Again, ſome Figures being Stronger than others, will force the Weaker figure to move after their Manner.

CHAP. VI.

The two Chief Parts belonging to Man, are the Head and the Heart, wherein Reſide the Rational Spirits.

THe Head and the Heart are the two Reſideing parts for the Rational Animate matter to Move more Variouſly and Agilly in, making Paſſions in the Heart, and Reaſons in the Head; and whenſoever thoſe Parts be Diſaffected, the Underſtanding and Paſſions are Diſordered, and many times ſo, as never to be Rectifi'd; but ſometimes this Diſorder comes by the Miſworking of the Senſitive Animate matter, and ſometimes by the Wrong Steps and Falſe Meaſures of the Rational Animate matter; but though the Animal Knowledge or Reaſon be Diſordered, yet not Extinguiſhed, unleſs the Animal Senſe be abſolutely Altered, which is to Die; for though they Move not Regularly, yet they Move after an Animal manner; As for Example, a Man, although he Goeth not Upright, according to his Natural ſhape, but Creeps upon his Hands and Knees, or that he is forced to

Roll from Place to Place, having neither Arms nor Legs, yet he Moves in an Animal manner, and partly to what his Natural ſhape is, for theſe Forced Motions, or Want of ſome of the Outward parts, Alter him not from being an Animal, nor yet from being a Man, unleſs all the Senſitive motions, which Naturally belong to their Figures, be Altered, and then he turns from that Kind of Creature.

CHAP. VII.

Whether the Paſſions are made in the Head or Heart?

SOme are of Opinion, the Paſſions are made in the Head: others, that they are made in the Heart; for my part, I am of the Latter Opinion, that is, that all Paſſions are made in the Heart, as Love, Hate, Fear, Anger, Grief, Jealouſie, Envy, Malice, and the like; and alſo the Will, and Opinions, which are a Kind of Paſſions; and that Imaginations, Conceptions, Fancies, Underſtanding, Judgment, Memory and Remembrance, is made in the Brain, and that, which we call Thought, or Animal Knowledge, is made both in the Brain and Heart; for if either of theſe two Parts be Wounded, that Knowledge Dies, as both the Senſitive Knowledge and Rational, both being that which we call Thought, the one belongs to the Body, the other to the Mind; for Touch is a Weak

thought,

thought, and Thought a Strong touch; and my Reaſon why I think, that the Paſſions are Created in the Heart, and not in the Head, is, Firſt, That Paſſion and Judgment ſeldom agree, for when we have the Paſſion of Fear, or Anger, or the like, all the Motions, that work to thoſe Paſſions, are felt in the Heart; for if we do obſerve, we ſhall find all Paſſions ariſe from the Heart, and all the Parts near thereto will be Diſturbed, when in the Brain we find no Violent motions at all, perchance the Senſitive part may be Diſturbed, as to make the Head ake as with a General Diſtemper. Secondly, There are oftentimes Paſſions felt, as it were, in the Heart, without any Knowledge or Thought of it in the Head, as when we ſhall be Sad, and Angry, and Fearful, and know no Reaſon why. Beſides, Objects many times Paſs by, or, as it were, Steal through the Senſes, and likewiſe Creep through the Brains, and raiſe a Paſſion in the Heart, without any Notice taken thereof, or Knowledge how it came Therein. Laſtly, That, although there is a great Sympathy betwixt the Paſſions and Imaginations, yet they are not after one and the ſame Manner of Motions, which ſheweth, they are Created in Several figures, the one in the Triangular Heart, and the other in the Spherical Brain, and the Different ſhapes of the Head and Heart, may be one Cauſe, that makes the Difference betwixt Paſſions and Imaginations, as well as the Different motions. But to prove Paſſions are made in the Heart, and not

in the Head, is, that when the Brain is Diſtempered, and Mad, as we ſay, yet the Paſſions may be Free and Regular; and Love and Hate, which are the two Chief Paſſions, may be Conſtant to the Objects they were placed on; thus the Mind or Soul, which is the Rational Animate matter, lies as much in the Heart as the Head, as alſo in all the other Parts of the Body, but the Different parts cauſe Different motions, both in the Senſitive and Rational matter.

CHAP. VIII.

Of Different Paſſions in one and the ſame Part.

AS for Paſſion, we ſhall Love and Hate at one and the ſame Time, but not one and the ſame Thing at one and the ſame Time, for that is impoſſible. But Different Paſſions are made according to the Subjects or Objects they Move by or to, yet the Rational Animate matter, which Createth Paſſions, may Move partly Sympathetically, and partly Antipathetically, at one and the ſame Time; As for Example, a Man may be in Love with a Woman for her Beauty, or Wit, or Behaviour, and yet have an Averſion to her Bad qualities; but a Man cannot Love the Perſon of a Woman, and Hate it at one and the ſame Time; but to the Creating of thoſe Paſſions that Sympathize, as Love, and Hope, and Joy, and the like, the Rational Animate matter

matter doth as it were Spread and Dilatate it Self; but for thoſe Paſſions that Antipathize, it Contracts it Self more together, as in Hate, Fears, Jealouſies, Doubts, Envy, Spight, and the like; and when two or three Paſſions ariſe at one Time, as a Paſſion of Grief for my Friend that is Kill'd, and a Paſſionate Hate to his Murtherer, or the like, then the Rational Animate matter Divides it Self, partly Moving after one manner, and partly Moving after a quite contrary manner, and ſo may Divide into as many Parts, and after as many ſeveral Manners, as their Place or Quantity will give way to. But when we Love what was Hated, or Hate what was Loved, then the Rational Animate matter Changes its Motions towards ſuch a Subject or Object without a Diviſion. But when they Move Diſorderly, the Paſſions are like a Tempeſt at Sea, Paſſions beat againſt Paſſions in a Confuſed manner, that is, the Motions of Paſſions croſs one another, Diſtempering the whole Body, cauſing the Senſes to Miſtake with the Violence thereof; Likewiſe in the Brain there may be Oppoſite motions in one and the ſame Degree of Animate matter, either Rational or Senſitive, either by an Alteration of Motion in one and the ſame Part of matter, or by Diviſions moving in Parts, but when the Rational Animate matter Moves in a Regular diviſion, and the Meaſures of Time, and the Notes of Motions skilfully Set, and rightly Kept, that is, Curiouſly or Neatly, and Carefully ordered, then there

there is an Harmony, which Harmony is a Quiet Mind, Gentle Imaginations, a Clear Understanding, a Solid Judgement, Elevated Fancies, and Ready Memory; but when this Rational Animate matter moves Disorderly, there arise Extravagant fancies, False reasons, Mis-understandings, and the like.

CHAP. IX.

The Affinity betwixt Imaginations and Passions.

IT is the Rational Animate matter that makes Passions, and not the Sensitive Animate matter, for the Senses only present the Objects, the Rational the Passions; which shews, the Rational Animate matter is as much in the Heart, as in the Head, and may be of the same Degree of Strength, although they Work Different wayes, as being Different figures, yet there is such Sympathy with each other, whether by Recourse or otherwise, as Passions will Raise Imaginations, Corrupt Judgement, Disordered Reason, and Blind-fold Understanding; And Imaginations will raise Passions, as Fear, Love, Hate, Doubt, Hope, and the like; which shews, that the Rational Animate matter in the Head and Heart hath such Affinity as the Sensitive Animate matter hath in the Stomack and Head, as the Pain in the Head will make the Stomack sick, and a Sickness in the Stomack will make the

the Head ake, I will not ſay at all times, but moſt commonly, neither will Imaginations at all times raiſe a Paſſion, nor a Paſſion an Imagination, but very often. But as there is Affinity between the Paſſion and Imagination or Thoughts in the Head, ſo between the Appetites and Paſſions, as alſo the Imaginations, but the Appetites are made by the Senſitive motions, and the Paſſions and Imaginations by the Rational motions. Likewiſe the Senſitive motions in making of Appetites do ſo reſemble the Rational motions in making of Paſſions, as there is Little difference, only the Senſitive matter and motions make Appetites on the Inanimate matter, and the Rational makes Paſſions on its own Subſtance.

CHAP. X.

Of the Brain.

THe Brain is not the Cauſe of Knowledge and Underſtanding, for a Bird that hath but a Little Brain, ſeems as Underſtanding, if not more, than a great Beaſt, as an Ox, or the like, which hath far Greater quantity of Brain; but perchance the Bird hath more of the Rational Animate matter in his Little Brain, than the Beaſt that hath more Brain, for the Rational Animate matter Moves within the Brain, not upon the Brain, for ſo Works the Senſitive Animate matter, the Brain being made of the Inanimate

animate part of matter; for when the Brain is Defective, it is cauſed by the Senſitive Animate matter, not the Rational Animate matter; yet oftentimes the Senſitive Animate matter Diſorders the Motions of the Rational Animate matter, as we ſhall ſee in Diſtempered and Sick bodies; Likewiſe the Diſordered motions in the Rational Animate matter, will Diſorder the Senſitive motions, as we ſhall ſee by Troubled minds.

CHAP. XI.

Of the Multitude of Figures in the Rational Matter, in the Brain, and Heart.

THe reaſon why we may have Millions of Several figures in our Memory at One time, ſo likewiſe raiſed up to our Remembrance, when we can receive but One Perfect figure through our Senſes at one time, is, that the Paſſages, for Outward objects to enter, are ſo Straight in all Animal figures, as that but one Object can take Place therein, I mean as being Perfectly diſtinct; for the Paſſages being Straight, many Objects entring at once, make a Confuſion, at leaſt a Diſorder; for if more than one Object be Preſented at one Time to any Particular ſenſe, they are receiv'd but by Piece-meals, as in the Small parts, and many times the Divided parts are ſo Mixt together, as no Piece is perfectly Seen or Heard, or Smell'd, or Taſted, or Touched; beſides,

ſides, the Paſſages being Straight, the Senſitive Animate matter cannot work ſo Regularly, having not Liberty; for it is not with the Senſitive Animate matter, as with the Rational Animate matter, by reaſon the Senſitive Animate matter works upon Groſs materials, as upon the Inanimate part of Matter, which makes, that it cannot Move ſo Nimbly, nor Divide into Parts ſo Suddenly, eſpecially in a Straight paſſage, as the Rational Animate matter can, which Moves only in Number and Meaſure, without any Dull or Inanimate matters mixture, for the Rational Animate matter can Figure out the whole World, and Millions of Several figures therein, Sooner and Swifter than the Senſitive Animate matter can Print one Figure upon any of the Senſes; and not only thoſe Figures that the Senſitive Animate matter Preſents, or hath Preſented, but makes thoſe Figures that were never Preſented, as thoſe we call Phantaſms; and as I ſaid, the Rational Animate matter hath more room to Move in, not being Incumbred with the Inanimate matter, when as the Senſitive Animate matter is Incumbred with the Inanimate matter, the Ear, Eye, Noſtrils, Mouth, or Pores of the Fleſh, ſo there may be a greater Quantity or Proportion of that Rational moving matter together in a Body, or Bulk, as I may ſay, than of the Senſitive Animate matter in the fore-ſaid Paſſages, and according as the Quantity of the Rational matter is, there is the more Knowledge, and Clearer Underſtanding, the Quicker Wit, and the Live-

lier Memory, the Freſher Remembrance, and the more Multiplicity of Thoughts, for it is not only the Largeneſs and Extent of the Place wherein the Rational matter Moves, that makes the more Knowledge and Underſtanding, and the like, but the Quantity of the Rational matter; for a Great Head may have but a Little Wit, or Dim Underſtanding, and a Little Head a Quick Wit, and Clear Underſtanding, if the Little Head be full of this Rational Animate matter, and the Great Head be empty thereof, but if the Room or Place be Large, and filled with this Sort of Animate matter, according to the Bigneſs, that Creature will be very Knowing, Underſtanding, and Ingenious; for imagine, that all the Heads of Mankind were put into the Compaſs of One Head, and ſufficient Quantity of that Rational matter therein, that Creature, whatſoever it were, would have not only the Knowledge of every Particular Brain joyned together, but that Knowledge and Underſtanding would Increaſe as Uſe-money, for that Bulk or Banck would Multiply being put together.

CHAP. XII.

Of Thoughts.

MAny wonder what Thoughts are, and how ſuch Millions can be within ſo Little a Compaſs as the Brain. I anſwer, that a Little quantity

quantity of the Rational Animate matter may make Millions of Figures, which Figures are Thoughts; As for Example, from Eight Notes Millions of Tunes are made, and from Twenty four Letters Millions of Several Languages may be made: Likewise One Lump of Clay may be moulded and formed into Millions of Several Figures; and like Pictures, Many Figures may be drawn in One Piece, and every Figure in a Several Posture; Likewise a Little Picture will represent so Great an Army, as would take up many Acres of Land, were it in a Pitched Field; again, a Globe no Bigger than a Head, will represent the Whole World. Again, say some, how is it possible there should be so many Several Thoughts in the Head at One time, and how from one Thought should there arise so Many of a Sudden, and at some times so Extravagant as to have no Coherence therein, at other times very Methodical and Sympathetical? To the first I answer, how many Several Postures may a Man put his Body into at One time, nay, I may say One Part of the Body? for how many Several Postures may the Face draw it Self into at One time? Secondly, I answer, that many Several Wheels will Move with One Motion, nay, with One Kind of Motion Several wayes, and many Wheels, with Several Motions Several wayes, and all within one and the same Compass, and from One Prime Spring. Again, some may Wonder how it is possible Figurative Thoughts can Inlarge and Contract the Dimen-

ſion and Extenſion; I anſwer, how is it with Proſpective Glaſſes, Convex and Concave Glaſſes? likewiſe a Screen, or a Fan, or the like, which can fold many Folds into one Fold, then can draw them out into a Plain, Straight piece again, and ſo Shut up into a Fold, or Open in a Plain piece as Often and as Quick as a Thought? and millions of the like Examples may be given, but theſe are enough for this Time, on this Subject.

CHAP. XIII.

Of Thinking or Thoughts.

THoughts are more Pleaſant to the Mind, than the Appetite to the Senſes, and the Mind Feeds as greatly on Thoughts, as an Hungry Stomack doth upon Meat; and as ſome Meat breeds Good Nouriſhment, and ſome Bad Nouriſhment, cauſing either Health and Strength, or Diſeaſes and Pain; ſo doth Thoughts, for Diſpleaſing Thoughts of Grief, and all Sad Remembrances, cauſe the Mind to be Dull and Melancholy, or Froward and Diſcontented; and Pleaſing Thoughts cauſe the Mind to be Chearfull, Pleaſant and Delightfull. Beſides, the Mind is like Chewing of the Cud, for what the Senſes bring in, and are Fed with Outward Objects, thoſe Swallowed Objects, the Thoughts of the Mind Chew over again; Thus the Mind is alwayes Feeding.

Beſides,

Beſides, the Senſes have no longer Pleaſure or Pain than the Objects Remain; but the Mind is as much Grieved or Delighted, when the Object is Removed, as when it is Preſent; As for Example, a Man is as much Grieved when he Hears his Friend is Dead or Kill'd, as if he Saw him Dye or Slain, for the Dead friend Lives in the Mind, not the Mind in the Dead friend; and if a Man have a fine Houſe, or great Riches, or an Excellent rare Race of Horſes, or the like, the Mind takes as great Delight in Thinking of his fine Houſe, as if it Dwelt in the Houſe, and as great Delight in Thinking of his Riches, or what he could Do with the Uſe of his Riches, for the Mind doth not ſo much Dwell in the Houſe, as the Houſe in the Mind, nor the Mind doth not take ſo much Delight in the Uſe of the Riches, as in the Thoughts of Uſing them, and the Remembrance of the Curious Horſes is as much in the Mind, as when the Horſes were in the Eye; for when the Senſe is Filled, the Mind can but Think, and the Mind may as well Think, when the Objects are Gone, as when they are Preſent, and the Mind may take as much Delight in Thinking what the Senſes Have Injoyed, as what they are to Injoy, or deſire to Injoy; for Thoughts are the Fruition of the Mind, as Objects the Fruition of the Senſes; for the Mind takes as much Delight, (if not more) in Thinking of an Abſolute Power, as when the Commands of an Abſolute Power be Obeyed, for Obedience dwells no more in the Mind,

Mind, when it Is Acted, than it did, Before it was Acted, or by the Imagination that it is Acted; Thus the Mind receives no more by Action, than it doth by Contemplation, only when the Pleasure of the Senses are Joyned with Delighfull thoughts, a Man may be said to be More Happy, though I believe, the Pleasure of Senses draws the Delight from the Thoughts; for the more at Rest the Body is, the more Busie the Mind is imployed, and as Torments of the Mind are beyond the Torments of the Body, or at least the Displeasure of the Senses, so the Delight of the Mind is beyond the Ease or Rest of the Body, or the Pleasure of the Senses.

CHAP. XIV.

What the Cause is, a Man hath not his Usual Knowledge, Sense and Reason, in a Swoon or Trance.

AS I have said, Infinite doth not Know it Self, so the Several parts in Infinite matter are Ignorant of each other; also the Several motions in one and the same Part, make a Man in a Swoon or Trance, neither have the Sense nor Knowledge as usually; for though there be no Alterations of his Figure, yet there are Alterations of the Natural motions belonging to his Figure; as for the Sensitive motions, although they do not Move to the Destruction, as the Dissolution of the Figure, yet they do not Move

Move to the Uſe of the Figure, but may Move as to the Uſe of another Figure, not of the Nature, Kind, or Sort of Animal; alſo the Rational motions may Move as to another Sort or Kind of Knowledge, like as Different Languages, ſo Different Knowledges, not Underſtanding each other, like as a Point or Pen, that Writes upon a Table-book, ſo the Animate matter may Write Several Knowledges, which can be Rubb'd out or Writ in, as often as the Pen and Book remains; So I will compare Several Knowledges to Several Languages, the Pen to the Animate motion, the Book to the Inanimate matter, or rather to the Figure; as for Example, Put the caſe, Latine were the Natural Language to a Man's Figure, and that he knew none other Language, then of Neceſſity all other Languages, as Greek, Hebrew, French, Dutch, Engliſh, or any other Language whatſoever, muſt neceſſarily be as Nonſenſe to him, being Ignorant in thoſe Languages; So when as a Man is in a Swoon or Trance, the Animate motions Rub out the Natural Language as the Natural motions, which are the Natural knowledges, and then Write Hebrew or Greek, which are Unknown Languages, which is, the Animate motions move other ways, than is Natural or Proper to the Figure, or Creature, then the Creature thus diſturbed hath, as it were, forgotten his own Language, ſo his own Natural knowledge, being wholly Poſſeſs'd or Indued with an other Sort or Kind of Language, which

is

is another Sort or Kind of Knowledge, but when as the Diſtemper is over, and that the Animate motions are Regular, according to the Nature and Propriety to the Creature as Man, then the ſame Natural language, which is the ſame Natural knowledge, and the ſame Natural motions are as they Naturally ſhould be, the ſame Creature as Man is as he was before the Swoon or Trance, but in the Swoon or Trance he was Poſſeſs'd or Indued with other Sorts or Kinds of Knowledge, which Unknown knowledges, as Unknown languages, cauſed by Unuſual and Improper motions, are rubbed out, as the Natural and Proper motions were, and ſo the Body and Mind is as Ignorant, when out of the Trance, of that Knowledge in the Trance, as when they were in the Trance of their own Native knowledge both of Senſe and Reaſon. Thus Several knowledges are not onely in Several and Different Creatures, but in One and the ſame Creature, which Several knowledges both of Senſe & Reaſon, were, or are no more Known to each other, than Several languages to Unlearned men. But yet every Particular or Different language is ſtill Language, although every Particular is not General; So every Particular and Different knowledge is ſtill Knowledge, although each Sort is not General; but if the Natural language, which is the Natural knowledge, which is the Natural motions, be never Rightly or Plainly Repeated again, then we ſay, that Creature, as Man, is become a Fool, Ideot, or Irrational Creature.

Creature. In truth, Swooning and Reviving is like Memory, Forgetfulneſs, and Remembrance, which is, ſuch and ſuch Figures and Motions are Rubbed out or Put by with other more Powerfull motions, making other Figures in the former Places or Figures, and after Repeated again, which Diſſolving and Repeating, or Creating of Figures by Motions, may be made ſo long as the Figure laſts, like as a Point or Pen that Writes upon a Table-Book, or Parchment, which Writing may be Rubbed out, and Repeated ſo long as the Book or Parchment remains; The like for Several knowledges of Senſe and Reaſon made by Animate motions, may be Rubbed out, or Put out, and Repeated again in the Several parts of the Body and Mind: Indeed every Several part hath a Several knowledge, and every Several Animate motion is a Several knowledge. But to conclude this Chapter of Swooning or Trances, in a Swoon or Trance all the Motions in the Senſitive paſſages, both Senſitive and Rational, are altered quite from the Nature of the Creature for a time, but after ſome time they move Properly and Regularly again; but ſurely the Creature in the time of the Swoon or Trance, was neither void of Senſe nor Reaſon, but had both, although not ſuch Senſe and Reaſon as was proper to his Nature and Figure.

CHAP. XV.

Of Senſe and Knowledge in Dead or Living Men.

SOme may ask this Queſtion, that if Senſe and Knowledge (as the Senſitive and Rational Animate matter,) be in Inanimate matter, and all Creatures compoſed of theſe Degrees of Matter, ſo that in every Creature or Figure, or Part of matter, there is Senſe and Knowledge, what Senſe and Knowledge hath a Man, or any other Animal, when they are Dead? I anſwer, that the Figure of that Man, and every Part of his Figure, may have Senſe and Knowledge, but not the Animal Senſe and Knowledge, for thoſe Motions proper for that Figure be generally Altered, not to be Repeated without a new Creation; for though the Animal ſhape is not Altered untill it be Diſſolved, yet the Animal motions of Animal Senſe and Knowledge are abſolutely or intirely Altered, ſo as the Dead Figure hath no more of an Animal Creature then barely the Shape, and the Shape is Diſſolving from an Animal ſhape, as faſt as the Senſitive Expulſive motions can Separate the Whole figure into Parts; but it is impoſſible for a Living animal to know what Senſe and Knowledge a Diſſolving animal, which is a Dead figure, hath, becauſe it is not an Animal when Dead. But ſuch Queſtions may as well be asked, what

what Sense and Knowledge Vegetables, Minerals, or Elements have, as to ask what Sense and Knowledge a Dead man hath; for though a Man may partly know of the Sense and Knowledge of other Animals by himself, being of Animal kind, yet he cannot know what Sense and Knowledge other Kind of Creatures have, and a Dead Animal is Changed from what it was, to some other Creature that must be.

CHAP. XVI.

Of the Motions of the Rational and Sensitive Matter.

THe Sensitive and Rational Animate matter is the highest Extract, it is the Quintessence of Nature, which is the Animate part of Nature, which is the Life and Knowledge in Nature, which is the Actions and Soul; as for the Rational Animate matter, having no Incumbrances, it can Divide and Unite, Dilatate and Contract it self Infinite Several wayes in its own Substance and Motions, but the Sensitive Animate matter Moves after another manner, for it Divides and Composes, Dilatates and Contracts with the Inanimate matter, and though the Rational and Sensitive Animate matter move not alwayes after one Manner, yet they move alwayes after one Nature.

CHAP. XVII.

The Power, the Rational Motions have over the Senſitive.

THe Rational motions in the Mind have great Power over the Senſitive motions in the Body, as to Perſwade or Command the Senſitive motions, to keep the Senſitive Paſſages or Doors to be Shut from all Outward Objects, when as the Mind would not be Diſturbed with Outward Objects, when it deſires only to move in Contemplations; Alſo the Rational motions in the Mind will Command, or Perſwade, and ſometimes Force the Senſitive motions in the Body, to keep Open the Senſitive paſſages, and to Labour in ſome Arts, or Studies, or Obſervations, as Reading, Writing, or Practiſing, or Working in ſome of the Appetites, ſo that when as the Mind is Ambitious, Covetous, or Wanton, it Forces the Senſes to Watch, to Work, to Play, and the like.

CHAP. XVIII.

Of the Regular and Irregular Motions of the Rational and Senſitive Animate Matter.

THere is ſuch Sympathy between the Rational motions in the Mind, and the Senſitive motions in the Body, as they oftentimes Diſturb each

each other, I will not ſay alwayes, for ſometimes the Rational motions are Regular, and the Senſitive Irregular, other times the Senſitive are Regular, and the Rational Irregular, but oftentimes the Irregularity of the Rational motions, cauſes the Irregularity of the Senſitive, and oftentimes the Irregularity of the Senſitive motions, cauſes the Irregularity of the Rational; As for Example, when as the Rational motions are ſo much Irregular, as to be Tumultuous, ſo as to cauſe Fearfull imaginations, or Imaginary fears, which Irregular Imaginations and Fears, cauſe the Senſitive motions to move Irregularly and Tumultuouſly; and this Animate matter and motions do not only move Irregularly, and Tumultuouſly, but Violently, as beyond the ordinary Capacity or Ability of the Body; as for Example, when ſome Men are Diſturbed with Imaginary fear, or Fearfull imaginations, which cauſes the Senſitive motions to Print in the Senſitive paſſages Irregular Objects, which cauſes a Man to ſee Strange unuſual Objects, which Men name Hobgoblins, Spirits, and Devils, as alſo to Hear ſtrange Noiſes, to Smell unuſual Sents, and to Feel unuſual Touches, and to be Carried into unuſual Places; and it is not to be Doubted, but all theſe Strange and unuſual Sights, Sounds, Sents, Touches and Violence were true, for no doubt, but ſuch Senſitive prints were made on the Senſitive paſſages, that cauſe the Unuſual Senſitive effects; for if ſuch Extravagant motions be made, ſuch Extravagant

ſenſes

ſenſes will be; as for Example, when Men ſay they are Pinched black and blue, no Queſtion, but they have had ſuch Pinching motions on their Body, as to be Sore, and many times the Black and Blue ſpots will remain, and when they ſay, they were Carried or Flung into ſuch a Ditch, or the like Place, I do not doubt it, for I ſee no reaſon but that the Whole body may be carried Violently from place to place by the Strength of the Animate motions in that Body; for certainly, the Animate motions in one Body, as a Man, do not ordinarily Work or Move to the utmoſt Power of their Strength or Agility; as for Example, Mad men in their Mad fits, have many times more Strength, than when they have not their Mad fits, for ſome that are, as we ſay, Outragiouſly mad, Ten men cannot Hold or Keep them in their Beds, and when as their Mad fits are paſt, they are ſo Weak, as a Womans ſtrength may Rule them. But to draw to a Concluſion, it is with the Animate matter and motions, as it is with Governours and Citizens, or Commons, they know not their own Power and Strength, untill ſuch time, as they make a Trial, or are Forced to it, for every Particular part knows not the Strength of the Whole, untill the Several parts Joyn all into One, as the Several powers of each Part into one whole Strength and Power, ſo the Animate matter and motions Moving and Working in Several parts of the Body and Mind, know not their own Abilities, untill each Part joyns as into one

one whole Power and Strength. Thus the Animate matter and motions in every Creature may be Ignorant of it Self, but when as the Animate matter and motions are United into one whole Power, they have great Force and Strength; but when as the Senſitive motions begin the Diſorder, Uproar, or Tumult, the Rational becomes ſo Diſordered with the Diſorder of the Senſitive, as it can neither Direct Prudently, nor Adviſe Subtilly, nor Order Methodically, and when as the Rational motions begin the Diſorder, Uproar, or Tumult, then the Senſitive motions cannot Act Orderly, Methodically, or Properly; but many times the firſt Beginners are the firſt Repenters.

CHAP. XIX.

Of Sleep.

ALthough the Senſitive Animate matter, or the Rational Animate matter doth never deſiſt from Moving, as being againſt the Nature, for Animate matter is in a Perpetual motion, yet that Matter both Senſitive and Rational, doth not alwayes Move or Labour in a like Degree, nor alwayes after one manner of Way, or in one Part or Figure, or in one Time, but Differently; as for Example, in Animals, Creation, Increaſing, Nouriſhment, Conſiſtence, Uſe, Convenience, Decays, Sickneſſes and Death, Grief, Joy, Love, Hate, and the like; alſo the Rational

Rational and Senſitive doth not Move Aſleep as Awake, or Awake as Aſleep, for Aſleep they Work on the Inſide of the Senſitive paſſages, and Awake on the Outſide of the Senſitive paſſages; for in Sle[illegible] deſiſt from Working, or Prin[illegible] or [illegible] utward Objects on [illegible]utward [illegible]nſitive paſſages, as [illegible]metimes wi[illegible]red with Outward [illegible]ork, as Outwa[illegible]ns, and ſometimes for [illegible]vant of Outwa[illegible]cts to Work and Move [illegible]n, other tim[illegible] their Appetite to Freedom [illegible] Liberty t[illegible]t from Outward Labours or [illegible]oyments, for though the Animate motions oftentimes move and work as Actively to Sleep, and in Sleep, yet it is eaſier to move Voluntarily, than when they are Bound to Outward objects, as to Work upon Conſtraint and Neceſſity.

CHAP. XX.

Of Diſturbance of ſome Parts, cauſing a Diſturbance in the Whole, as to hinder from Repoſe or Sleep.

ALthough the Senſitive nor Rational matter doth never deſiſt from Moving, being in a Perpetual motion, yet they do not alwayes Figure or Print Outward Objects, neither do they alwayes make Uſe of the Senſitive outward Paſſages or Doors, for the Senſitive motions make no Uſe of the Outward paſſages, when

when they Shut them up from Outward objects, for though Sensitive motions move in the Sensitive passages for their Consistence, yet not alwayes for their Use, as we may perceive, when they are Shut for Sleep; but the Sensitive Animate motions in the Sensitive passages cannot Shut the Doors when they will, although they have the Rational consent, for sometimes the Irregular motions in some Parts of the Body, hinder the Sensitive repose, as also the Rational; as for Example, when as the Sensitive motions are Irregular in any one Part of the Body, as in a Finger, or a Toe, it disquiets all the rest of the Animate motions both of Body and Mind, insomuch as the Sensitive motions in the Sensitive passages cannot move so Regularly or Orderly, as they would do, if the Sensitive motions in the Finger or Toe were Regular; neither can all the Animate motions both of Mind and Body all times rectifie the Disorders of that one Part, although they get the Assistance of other Motions in other Creatures and Arts, so that some Discords in some particular Parts hinder the Order of the Whole man, or such like Animal Creature; but when the Disorder is not so much as to hinder a through Order, but that there is only a half Disorder, or a partial small Disorder, then the Sensitive passages are partly Closed, and partly Uncloſed, as in Slumbers, or Half sleeps, or to Shut and Open untimely.

CHAP. XXI.

The Difference between Sleeping and Waking.

THe Difference between Sleeping and Waking, is, that in Sleep the Senſitive Animate matter and motions Work on the Inſide of the Senſitive paſſages, as they do when as Awake on the Outſide of the Senſitive paſſages, and when as the Senſitive motions Work on the Inſide of the Senſitive paſſages, they Work by Rote, that is, they Work as to make Prints and Figures on the Inſide of the Senſitive paſſages, without the Help or Patterns of Outward objects, which is the Cauſe, that, when as the Outward paſſages are ſhut from receiving Outward objects, then the Senſitive motions in the Senſitive paſſages Work inward, and their Inward work is for the moſt-part Erroneous, for want of Objects, ſo as they work Confuſedly and Extravagantly, Figuring or Printing a Lions Head, or the like, to a Foxes Tail; or Printing or Figuring Pictures of Outward objects ſo Confuſedly and Extravagantly, as to Joyn partly Animal, partly Vegetable, partly Mineral, or partly Elemental, or one Vegetable, or one Mineral, or one Animal, or the like to an other, not any wayes Agreeable to each other, or at leaſt not their Parts agreeable to each other, all which is for want of Outward objects, to take right Examples from, for Working

Working by rote, and by Senſible remembrance, they Work falſly, which cauſes the Rational motions to move Erroneouſly in Sleep, by reaſon the Rational moves according, for the moſt part, to the Senſitive Prints or Pictures; but ſometimes the Senſitive, and ſo the Rational, moves juſt to thoſe Objects, that have been formerly Printed on the Outſide of the Senſitive paſſages, and then thoſe Senſitive motions cauſe Perfect Dreams; but if the Senſitive motions make no Perfect Prints or Figures on the Inſide of the Senſitive paſſages, or that the Rational motions, when as the Outward Senſes are ſhut and repoſed, move not in a perfect Ground or ſculpt Figures, but only move in a Streaming or Flowing Dilatating motion, then a Man ſays, he did not Dream, that is, he did not Think, and Believes he was all the time, he was Aſleep, as if he was Dead, as being without the Animal Senſe or Knowledge, but the Man is miſtaken, for the Animal Senſe and Knowledge is in the Animal Mind and Body, but doth not move in the Animal Mind and Body Aſleep, as it doth Awake; I ſay, not alwayes or at all times ſo, but ſometimes it doth, for in Madneſs the Rational and Senſitive motions work or move as in Sleep Awake, and Awake as in Sleep.

CHAP. XXII.

Of Sleep and Dreams.

SLeep is cauſed by a Tiredneſs of the Spirits; for when the Senſitive motions are Tired with the Working on the Inanimate part of matter, which Tiredneſs is Slacking the Motions, or Changing their Motions, as when they Work Laſily, then the Figure grows Drowſie, and the Senſes Dull, being weary of Pencilling, & Copying out Objects upon the Optick Nerve. Likewiſe with Printing Letters, and Setting Notes on the Drum of the Ear, or in Drawing Platforms of ſeveral Taſtes, Touches and Sents on the Tongue and Pores of the Fleſh, or Striking or Playing on the Nerves, and on the *Dura mater* and *Pia mater* of the Brain; but many times the Figure grows Drowſie, and the Senſes Dull, when the Senſitive motions are Idle for want of Work, that is, having no Variety of Objects preſented to them; I mean, of ſuch Kind of Works, for the Animate matter never ceaſes to Move, although the Motions are not alwayes Agil and Quick, nor after one and the ſame manner; but when they Alter the Motions, as I may ſay more proper than to Slacken them, they do as it were caſt Anchor, pulling down their Sail, going as it were under Hatches, and the Figure that is like a Ship, where the Motions of the Breath are like Waves of Water,

ter, that Heave it up, and then Sink down, but Sail not, nor Steer not to any Coaſt; and the Senſitive Animate matter, which is in this Action like Mariners, when they Work under the Hatches, Drawing and Winding up the Slimy Humors in the Body like Ropes by Attractive motions, Staying and Setling the Looſe parts by Retentive motions, Placing and Putting Diſordered parts into their Proper places by Digeſtive motions, and all the Motions buſily imployed; ſome Mending the Figure, Stopping the Leaks, Dearning and Sowing together the Torn Sails, Oyling and Greaſing the Keel, Pitching and Tarring the Creviſes, Tying and Twiſting the Ropes, Drawing the Superfluous moiſture to the Gutter, ready to be Pumpt out, Sweeping all the Rubbiſh and Dirt on a Heap, ready to be Flung out; ſome Running up, and Returning from the Deck, which are the Pores of the Skin: but the Rational Animate matter is the Maſter of the Animal Ship, and the Senſitive Animate matter, as the Saylors, theſe Work on the Inanimate part of matter, the other Directs, when occaſion ſerves, that is, when the Body is in Action; for though the Rational Animate matter never Labours on the Inanimate part of matter, yet they Counſel and Direct the Animal Ship, when it is Built, and ſet afloat, that is, when the Body is come to the full Growth, and Orders it in Bluſtring Storms, and Great Dangers: but the Rational Animate matter, when this Animal Ship is caſt

to

to Anchor, which is to Sleep, moves only in a Rocking or Rouling motion, as it were from side to side of the Cabbin, which is the Brain, making no Perfect Figure, nor giving Direction; this is Sleeping without Dreaming, but Dreaming is, when they move in Figures, making such Figures, as these Objects, which have been Presented to them by the Sensitive motions, which are only Pictures or Copies of the Original Objects, which we call Remembrance, for Remembrance is nothing but a Waking Dream, and a Dream is nothing but a Sleeping Remembrance; But if the Sensitive Animate matter moves in the same Manner, on the same Place, as Printing and Drawing such Figures or Objects in the Optick Nerve, or Setting such Notes or Letters on the Drum of the Ear, or Drawing such Platforms on the *Dura mater* or *Pia mater* of their Brain, or the Tongue, Flesh or Skin, of their own accord, without the Presence of the Outward objects, then we See, Hear, Taste, Smell, Touch as strong as if we were Awake, if their Motions be as Strong and Industrious; but many times we have in Sleep those Objects but in Part, and not in Whole, the reason is, that either the Sensitive Animate matter is Slow, or else they are not so Perfect Artists to Work without a Pattern, Working by misplacing and mistaking, or else Working by halfs, according to their Skil, or as Appetite moves them, making a Hodg-Podg or Gallimophry of many several Pieces or Draughts into one

Figure

Figure or Picture, which make Extravagant Dreams, by reaſon they Work not in a Methodical manner, and the Rational Animate matter moving in the ſame manner, makes a Mixt reſemblance; but the Senſitive Animate matter having not the Outward objects in Sleep to Work by, ſeldome works Perfect or Plain, and working Imperfectly, they move Diſorderly, and for the moſt part, that which makes us ſo often Perturbed in our Sleeps, is by moving Croſs and Irregular, which croſs Irregularity inſnarls ſeveral Motions, ſo as there is no Diſtinction, which is the reaſon, that our Dreams are ſo often Obſcure and Dark, as we can make nothing of them; and when the Rational Animate matter moves Croſs and Tumultuouſly, our Dreams are moſt commonly Fearfull; and when the Senſitive Animate matter Works ſo Diſorderly, our Dreams are Painfull; and when the Senſitive Animate matter works Perfectly, and the Rational Animate matter moves Juſtly, we have as much Knowledge and Underſtanding of what we Dream of, and as much Satisfaction from our Senſes, as if we were Awake, and the real Objects preſent to us.

CHAP. XXIII.

Dreamings of Living and Dead Figures.

THoſe Friends & Acquaintance that have been Dead a long time, and appear in our Sleep,

Sleep, we never queſtion the Truth of their Life, though we may queſtion them how they Lived; again, the reaſon is, that theſe Figures are as Perfect and Lively to our preſent Senſes in our Sleep, as when we are Awake, for oftentimes the Sleeping motion Prints Figures on the Inſide of the Optick Nerve, as on the Inſide of the *Pia mater*, as the Waking motion doth on the Outſide, and when we Hear them as it were Diſcourſe words, right on the Inſide of the Drum of the Ear, or *Pia mater*, by the Senſitive motion, as on the Outſide, when we are Awake; for all the Senſitive matter Works Inwards Aſleep, as Outward Awake; for if we ſmell Sents pleaſing or diſpleaſing, the Senſitive Spirits draw Lines, and ſet Notes on the Inſide of the *Dura mater* and *Pia mater* of the Brain; And ſo for Taſte and Touch, they draw Platforms in the Inſide of the Skin, either of the skin of the Tongue, or any other Outward part of the Body, as they do on the Outſide of the skin Awake; Thus the Senſes preſent as Perfect Prints to the Rational matter oft times in Sleep as Awake, only they Print on the Inſide Aſleep, and on the Outſide Awake, and what Rational Creature would not believe their Senſes? for ſhould a Man ſee an other man Dye, and ſee him Buried, and afterwards ſhould ſee that man Alive again, and hear him Speak, and Touch him, ſhall feel the Subſtance of Fleſh, would not he think he Lived? *Thomas* the Apoſtle queſtions the Relations of our Saviours Reſurrection from the Grave,

Grave, but never queſtioned his Senſes, when he Saw and Touched him; So in our Dreams, when the Senſitive Animate matter Prints ſuch Figures on the Optick Nerve, as of ſuch a Perſon which is Dead, the Rational matter ſtraight Patterns out the Senſitive Print, and when the Senſitive Print, and the Rational Figure is juſt alike, the other Motion of the Rational matter cannot queſtion the Truth of that Figure, or Figures being there, though they may queſtion how they come Alive again, treating with it, as if Awake; the ſame is, if the Senſitive Animate matter Prints any thing as Dead, which is Living, and the Rational Patterns it, the reſt of the Rational motions make no queſtion of the Truth of thoſe Sleeping motions, untill Waking motion otherwayes Inform them; for Rational motion in every Particular Figure knows little of the Senſitive, but what the Senſes ſhow them in the Several motions, yet the Rational motion generally knows, what they Preſent unto them, which every particular Senſe doth not, each Motion is Unknown, and are Strangers to each other in one and the ſame Figure, for the Ear knows not what the Eye ſeeth, nor the Eyes know not what the Noſe ſmells, nor the Noſe knows not what the Tongue taſtes, nor the Tongue knows not what the Body feels, but the Rational Animate matter in a Figure, knows all the Senſitive motions in the ſame Figure, as long as the Figure is Perfect, and Moves in an Animal way, and that the Rational motion

moves Regular; for when the Motions are Irregular, they can take no Perfect Copies, nor Notice how the Senſitive move, that is the reaſon that in Perturbed Paſſions, which are only Irregular motions, the Senſes become as it were Uſeleſs to them, but moſt commonly the Diſorder of one brings the Diſorder of the other, I will not ſay, at all times; and ſo when the Senſitive Spirits are Regular, the Rational is Regular, but not at all times, for ſometimes the one is Regular, the other is not, but the Rational which takes Copies of the Senſitive, is oftner Diſordered by the Senſitive, than the Senſitive by the Rational, for when there is Grief in the Mind, many times the Body is in good Health, but it is ſeldome known, when the Body is Sick, but the Mind is Troubled.

CHAP. XXIV

Of Local Dreams.

THe reaſon that many times we Dream of Walking Woods or Houſes, and the like, is through this following reaſon: The Rational Animate matter, as I often ſaid before, turns moſt commonly into ſuch Figures, as the Senſitive Animate matter Prints, or hath Printed upon the Senſes; now if a Tree, or Houſe, or the like, be Printed on the Inſide of the *Pia mater*, or the like Senſitive Part, when we are Aſleep, the Rational Animate matter ſtraight Figures

Figures them, theſe Figures move after a Local manner, although they have not an Animal or Local Shape; the reaſon is, that the Rational Animate matter, being Purer in it Self, without the mixture of Inanimate matter, moves only in their own Matter, and the Figure moves in the Matter, whereas the Senſitive Animate matter Working upon the Inanimate part of matter, Moves in that Inanimate matter, and not the Inanimate matter in the Senſitive Animate matter, that is, the Senſitive Animate matter moves in the Inanimate part of matter, and the Inanimate part of matter is Moved by the Senſitive Animate matter; Thus the Senſitive Figure is Moved, but not Moving, but the Rational Animate matters Figures give their own Motions; Likewiſe if we have ſeen a Battel, or heard of a Battel, and afterwards we Dream of the ſame, or of the like Battel, then the Rational Animate matter puts it Self into Animal Figures, and Moves after a Local manner, each Figure placing it Self after that manner or way, as was Related, or Printed by the Senſes, or after a way of its own Invention; and when the Figures encounter each other, as they muſt do to Fight a Battel in the Brain, and then ſome ſeem to be Falling, and others Dead, and ſome Mangled, Thoſe Figures are as Falling and Broken, and ceaſe to Move after the Local manner; and when one Party ſeems to Move as in a Confuſion, then the Motions are Irregular, and juſt as the Senſes preſent; ſo doth the Rational Ani-

mate matter Act in the Brain, when we Sleep, and ſometimes when we are Awake, as in Imagination, but eſpecially in the Diſeaſe of Madneſs.

CHAP. XXV.

The Rational nor Senſitive Motions do not at all times take a general Notice or Knowledge in their own Body and Mind.

RAtional motions in the Mind do not at all times take Notice of the Senſitive motions in the Body, that is, the Rational motions do not at all times take Notice, as to Figure the Senſitive Prints in their Rational Matter or Subſtance; as for Proof or Example, the Mind many times when it is in a Serious Contemplation, or Violent Paſſion, will take no Notice of the Senſitive motions in the Body, for in a Serious Contemplation, the Mind neither takes Notice of thoſe Objects, as are Preſented to any of the Senſes, as Seeing, Hearing, Smelling, Taſting or Touching. Thus much I my Self have known by Proof of my own Mind and Senſes; alſo ſome Men in Violent Paſſions receive a deadly Wound, and at the preſent take no Notice thereof, but when as the Serious Contemplations or the Violent Paſſions are paſt, then the Senſitive pains are taken Notice of, as alſo the Senſitive objects, which Expreſs that the

the Senſes have Knowledge different or ſingle from the Rational, for the Senſe Felt it at the preſent, as well as after, although the Mind did not take any Notice thereof; and as in the Whole, ſo in Parts, both in Body and Mind; as for Example, when as a Man is in a ſerious Diſcourſe, the Mind is ſo Attentive, as not to take Notice of any other Part of the Body, but of the Tongue and Words ſpoken, for if any other man Pulls or Pinches any of the other Parts of the Body, neither the Ear hears his Words, nor Fleſh feels his Touch, unleſs he uſe ſuch Violence as to make a double or treble Outward motion, that is, to make a more Violent Outward motion, than the Inward motions are at that Preſent, or more Fix'd than the Set Motions are in thoſe Particular Parts. But to Conclude, and to Prove that the Mind doth not at all times take Notice of the Senſitive Actions or Knowledge, when a Man deſigns to go to ſuch a Place, or to ſuch a Man, or Woman, or the like, after the Mind hath deſigned to what Place or Perſon the Body ſhall go, the Mind ſeldome regards the Bodies motions, as how the Feet go, or the Body moves, for the Mind regards not every Step, nor the meaſures of each Stride or Slip, nor many times the Place he goes to, and yet the Feet carry the Body directly to the deſigned Place or Perſon; but if the Senſitive Animate matter, which is the Mover of the Body, ſhould not Regard, or ſhould not Knowingly order every Step and Motion of the Feet, the

the Body would not Move out of its Place, or not Go, where it was Designed.

CHAP. XXVI.

Of Figure Presented to the Senses.

THe reason, why Figurative Senses are Quicker, than the Figurative Growth, is, it is less Labour to Print on the Inanimate part of matter, than to Cut out Sculpt Figures, both for the Strength of Actions, and for the Variety of Actions therein, fetching their Material a long way, and from many several places, which requires time and place, when Printing is but an Impression made upon a Flat.

CHAP. XXVII.

Of the Several Senses.

THe general Opinion is, that all Objects come through the Optick Nerve, and Print the Figures received, on the Brain; and that there are, nor can be no Figures in the Brain, but what the Opticks bring in, and have passed through the Eye: It is true, by Experience we find, that without an Eye we cannot see Outward objects as they are without us, yet we see those Objects as they are without us in our Sleep, when our Eyes be shut; Thus the Sense of Seeing is not lost, although the Eyes were out,

out, and the Optick Nerves ſtop'd up. But ſome will ſay, thoſe Objects in Dreams have paſt through in Part or in Whole, therefore the queſtion will be, whether an Animal can have an Inſight, if it were Born blind; but if it be ſo, as the Opinion is, that no Figure or Inſight can be, but what comes or hath paſſed through the Eye, and Optick Nerve, muſt want that Senſible Knowledge, for according to that Opinion, the Ear can do the Underſtanding no Service as toward that Senſe, by reaſon Sound can make no Figure to Sight, neither will Taſte, nor Sent; But ſome may ſay, Touch may diſcover ſomewhat of that Senſe to the Underſtanding, but I think not: for in my Opinion, Touch is as Senſeleſs to Inſight as Sound; for we cannot Comprehend more of Touch, than of Sound, for Depth and Breadth are no more to Inſight, than High notes and Low notes, nor Soft nor Hard, no more to Inſight than Swift and Slow, Sharp or Flat, nor Pleaſure nor Pain, no more than Harmony and Diſcord; but my Opinion is, that Figures are as Inherent to the Mind as Thoughts; and who can have an Unfigured Thought? for the Mind cannot have Thoughts, but upon ſome Matter, and there is no Matter but muſt have ſome Figure, for who can think of Nothing? but the Mind is like Infinite nature, having no Dimenſion or Extenſion, no Centre nor Circumference, nor Breadth nor Depth: and as the Animate matter Creates Figures, ſo the Mind, which is the matter Creates

Thoughts,

Thoughts, which Thoughts are the Figures of the Mind; for when we hear of a Deity, we ſay in Words, it is an Incorporeal thing, but we cannot conceive it ſo in Thought, we Say we do, but we cannot Prove we do; 'Tis true, the Mind may be in Amaze, and ſo have no Fix'd Thought of any Particular thing, yet that Amaze hath a Figurative ground, although not Circumſcribed; as for Example, my Eyes may ſee the Sea, or Air, yet not the Compaſs, and ſo the Earth or Heavens; So likewiſe my Eye may ſee a long Pole, yet not the two Ends, theſe are but Parts of theſe Figures, but I ſee not the Circumference to the uttermoſt Extenſion, ſo the Mind in Amaze, or the Amaze of Thinking, Cuts not out a Whole and Diſtinct Figured Thought, but doth as it were Spread upon a Flat, without a Circumference, and though there are not ſuch Figures in the Brain, as it brought through the Opticks, yet ſuch Figures as the Mind Creates; for the Mind is Animate matter, and Animate matter is Self-motion, and Self-motion is alwayes Moving and Working, which Working is Figuring. Thus the Senſitive Animate matter Prints Figures in the Brain, and the Rational Animate matter Creates Figures in the Brain after its own Invention, which are Imagination and Conception, wherein are made Imaginary Worlds, without the Materials of Outward objects, and perchance theſe Motions may Create ſuch a Figure as this World, and ſuch ſeveral Figures, as the ſeveral Creatures therein,

therein, although not ſo Solid and Laſting, becauſe thoſe Motions want thoſe Groſs materials, which they ſhould Create it withall; but the Senſitive Animate matter in this caſe, Prints theſe Figures upon the Brain, like as when it doth the Outward objects, and when the Senſitive Animate matter Works on the Inſide, as in Sleep, then it gives an Inſight, which are Dreams, according to their Copied Prints, and theſe Motions may make Light, Colours, Tunes, draw Plat-forms of Taſte and Sent, make Prints of Touch, not only the Rational Animate matter by Imagination, but the Senſitive Animate matter gives a Senſible Touch on the Brain of all the Outward Senſes, by which Touch, I mean Senſible Knowledge. Thus the Interior motions may move the Brain with the Variety of every Senſe, without the Exterior Paſſages or Objects, and although it may not make thoſe very Objects, yet ſuch as are Proper for each Senſe, and of the ſame Nature as I ſaid before, Draw lines of Light, Gathering motions make Clouds, Triangular motions make Colours, Inſnarled motions make Darkneſs, without the Outward object, and all other Motions that make ſeveral Printed Figures; Likewiſe Reflections without the help of the Eye, and ſo Re-bounds and Retorts; for Sound and Set notes Print Words, and Plain Tunes without the Ear; So likewiſe for Taſte, Sent and Touch; but when the Brain is filled with Outward objects, the Natural motion ſeldome Works after

their own Invention, having not Room as it were, or elſe it is as it were Over-burthen'd with Work, having more Objects brought in, than they can either Conveniently and Regularly work or move on; but Weak minds which are Slow moving matter, think Life an Inſenſible thing, and the Head or Brain empty of Figures, when it is not filled with Outward objects, like as a Barrel is not filled with Liquor, they think Empty, becauſe the Thin Air, with which it is filled, is not Subject to their Groſs Senſes, ſo not to their Weak Capacities. Thus it is not the Outward objects that make the Senſe, but the Animate matter, which is Self-motion, which is the Senſe and Knowledge, and the Different motions therein, and therefrom, make the Differences thereof, and though Different Senſe and Knowledge may be in Different, and Several Figures, and ſuch Kind of Senſe and Knowledge proper for ſuch Kind of Sorts of Figures, yet the Figure adds nothing to the Senſe and Knowledge, although the Animate matter may give a Figure ſuch a Kind of Senſe and Knowledge, and when that Figure Dies, that Kind of Senſe and Knowledge may Alter, which was Proper to that Kind of Figure; yet if it were the Figure that gave the Senſe and Knowledge, and not the Animate motions, there would be no Alteration when the Figure is made, or any extraordinary Paſſion, where by Experience we find, the Senſe and Knowledge do Alter all, though the Figure be Perfect and in Health.

CHAP.

CHAP. XXVIII.

Of Hearing and Seeing, and the other Senſes.

SOme may think it ſtrange, that One Word ſhould ſtrike or enter into Several Ears at One Time, but ſurely it is not more ſtrange that One Word ſhould ſtrike or enter many Several Ears, than that One Object ſhall enter into many Several Eyes at One Time; for the Senſitive motion and matter in the Ears receives Words or Sounds, as the Senſitive matter and motion in the Eye doth receive Objects, for the Motion of the Objects are not the only Cauſe of Hearing or Seeing, or the Effects of the other Senſes, but the Motions in the Senſes make ſuch Motions as the Objects; and for proof, when as the Senſes are Stop'd or Shut, the Objects are Uſeleſs, but the Senſitive motions will Print or make ſuch Figures as Outward objects, without the Help of Outward objects; as for Proof, thoſe that are Mad or Conceited, will Hear, See, Feel, Smell and Taſte, ſeveral Sights, Sounds, Words, and the like, without Outward objects. But Words and Sound are trebly made, firſt they are made in the Object, then in the Senſe, and laſt in the Mind; but when as a Man Speaks to an other man, they are made many times over Several wayes; as for Example, a Man before he Speaks, Thinks of thoſe Words he ſhould

Speak, then those are made in the Mind of the Speaker, by the Rational matter and motions, then he Speaks those Words, then they are made in the Mouth of the Speaker by the Sensitive motions, as also in his Ears when he Hears himself Speak; also those Words are made in the Ears of the Hearer by the Sensitive motions and matter, and then in the Mind of the Hearer by the Rational motions and matter, and if those Words be Spoken to a Multitude of Men, from those Words are made Multitudes of Copies of those Words in the Multitude of Ears and Minds; This shews, that it is not, as each Mind and Sense will make them, but Really as they are, so that we may well perceive, that some and the same Motions, and Figures, and Matter, is in the Senses and Mind, as in the Outward objects, and that some and the same Motions, Figures and Matter, are in the Outward objects, as in the Mind and Senses, as in Madness; and also in Multitude, which expresseth all these several wayes of Sense and Reason and Objects.

CHAP. XXIX.

Of Particular Objects entring into Several Men's Particular Senses.

AS for Particular Objects to enter into Several Men's Particular Senses, some may Wonder, how that can be; as for Example, One Word to enter into many Several Ears; but in my

my Opinion, Sound ſpreads as Light doth; as for Example, a Small Candle will inlighten a Large Compaſs, by reaſon, Rayes of Light ſtream equally from the Centre of the Candle to the Circumference; So doth Sound, for when as a Piſtol or the like Shoots, or makes a Sound, or the Mouth of a Creature, the Piſtol, or Mouth, or that which makes the Sound, is the Centre, which ſpreads Sound, as Fire doth Light; and when ſuch a Compaſs of Air is fill'd with Sound, either Vocal or Verbal, every Ear that ſtands in the Compaſs, muſt upon neceſſity receive the Sound, if the Ear be not Deaf; Likewiſe every Eye may ſee Light that is not Blind, and Rebounds of Sound are as the Reflexion of Light, and Verbals are received into the Ears, as Figures into the Eyes, and as ſeveral Lines of Light Intermixt make Colours, ſo ſeveral Notes or Stops of Sound make ſeveral Tunes; but ſome may ſay, that if the Air were full of the ſame Words or Notes, that more would enter the Ear than was needfull, and ſo would make a Confuſion; I anſwer, that cannot eaſily be, for the Ear can but receive a Due Proportion, unleſs the Ear be Defective, the like for the Eye, as ſo for the other Senſes. But to conclude this Chapter, the Motions of Outward objects Move and Figure the Air, being a Rare and Soft Agil Subſtance, to its own Likeneſs, and ſo long as thoſe Figures or Motions laſt, thoſe Figures and Motions are Senſible to the Senſes, for the Senſes Move according to the Motions of the Objects

in

in the Air, and for the moſt part, the Reaſon Moves according to the Senſes.

CHAP. XXX.

Of Light and Colours.

LIght and Colour is made upon the Optick Nerve as Sound on the Drum of the Ear, for Light the Senſitive Animate matter draws long, ſtraight, ſmall, even Lines upon the Optick Nerve, and when Colours are made, Notes are ſet upon thoſe Lines drawn upon the Optick Nerve; Colours are made when thoſe Lines are ſet with Notes, as Quavors, Semi-quavors, &c. but Light is only when thoſe Lines are drawn without Notes.

CHAP. XXXI.

Of Hearing.

AFter the ſame manner is Sound received at the Ear, only the Difference is, that inſtead of Drawing or Printing the Outward objects, received through the Eye, Printed on the Optick Nerve, the Senſitive Animate matter Sets or Pricks down Notes and Draws Lines on the Drum of the Ear, as Muſicians do upon Paper, or the like; and the Senſitive Animate matter in making them Run, and make Stops, according as the Vocal Sound is Set, and it is Louder

or

or Lower, according as they work Weaker or Stronger; but for the Verbal, it is Writ or Printed on the Drum of the Ear in Letters, for Words and the Knowledge, the Animal Figure takes, is, when the Rational Animate matter moves according to those Letters or Notes, or wayes of Division; but in a Confused Sound there is no Order, Time, nor Stop kept, nor no Perfect Note, nor Letter, nor Line Prick'd, or Printed, or Drawn, but as we Vulgarly say, it is all Scrible Scrable, or else Ciphers set for Notes, and like as it is to the Opticks, so it is to the Ear, for the Notes and Letters are as Pictures which Fade; for as the Outward motions Slacken, so the Vocal and Verbal Sound Dissolves, and the Memory and Remembrance of Sounds Vocal and Verbal is, as the Sense of the Objects on the Opticks.

CHAP. XXXII.

Of Taste, Touch, and Smell.

THese Senses are made by such Motions as Sound is, and as they are Set on the Drum of the Ear, so these are Set on the Nerves of the Tongue, or on the Skin, for when the Skin is off our Tongue, we cannot Taste; Likewise for Touch, 'tis set on the Nerves and Sinews, and when the Notes are set Harmoniously, it Pleaseth the Senses, otherwise it Displeaseth them, which Displeasure is Pain in the Sensitive Animate

Animate matter, and Hate in the Rational Animate matter. As for Sents, they are Motions that Draw like Lines, like a Platform upon the *Pia mater* of the Brain; indeed the second Draught of the Sensitive Animate matter, is to Draw all their Figures upon the *Pia mater* of the Brain.

CHAP. XXXIII.

Of Touch.

TOuch is the general Sense of the Whole Body, which the other Senses are not, for though every Part of the Body is of a several Touch, yet it is all Touch; when Sight only belongs to the Eyes, Sound only to the Ears, Sent only to the Nostrils, and Taste only to the Tongue; besides, Any of the Senses, nay, All of them may be Wanting, as if they did not belong to Life, (as indeed they do not, but are only as Conveniences to the Life, and not Necessary) whereas Touch is as it were the Life of the Figure, for when this Sense is generally wanting in the Animal Figure, it is as we say, Dead, that is, the Natural motion belonging thereto, is generally Altered, or quite Changed as we say. This Sense is received through the Pores of the Flesh, and the Nerves are the Instrumental Strings, whereon Motion Playes, either a Harmony of Pleasure, or a Discord of Pain, for as their Strings are struck, so is Pain

or

or Pleasure felt; but I have treated sufficiently of this Sense in the Chapter of Numb'd Palsies.

CHAP. XXXIV.

Of the Pores of the Body.

THe Pores are Passages, which let Out the Smoke or Vapour, Unnatural Heat, and the Superfluous Humors in the Body; also they are Passages to let In Comfortable Warmth, Refreshing Colds, Nourishing Air; these Passages have their Inconveniencies, for they are a means to Conveigh out the Good with the Bad, and many times take in Infections, as malignant Diseases, that pass through the Pores, for Infection comes in as much through the Pores, as any other Passage of the Body. Besides, many times the Radical moisture is Carried out by Unnatural Heats, and some times the Vital Spirits by too many Transpirations; but these Pores are Drawn or Shut Closer together by Contracting motions, or set Wider open by Extenuating motions, but if these Common and Necessary passages to the Interior parts be too Close shut, either by Cold Contractions, or Hot Contractions, it Smothers and Choaks the Vital parts by keeping in the Vapour or Smoke that should go forth, for the Pores in this Case are as the Funnels of Chimnies, wherein the Smoke ascends up, and goeth out, and if they are set too Wide

open by the Extenuating motions, they Cauſe the Body to Starve, by giving Paſſage to ſuch matter, as ſhould be Kept in to Feed the Body, or by giving too free Paſſage to the Natural moiſture, that ſhould Quench or Temper the Heat in the Body, or by giving too free a Paſſage to the Gadding ſpirits that ſhould ſtay in the Body, to be imployed to the Subſtance and Strength thereof. Beſides, when they are too Open, they are as apt to take in, by giving Paſſage to that which is a Prejudice to the Life of the Body, as Infections, Malignity, or Unnatural Colds, or the like; but the Pores of the Body are alwayes Imployed, where the other Paſſages of the Body are Imployed but ſome times. But to conclude this Chapter, though the Pores of the Body be the leaſt Doors or Paſſages of the Body, yet they are more in Number than all the other Paſſages, for the other Paſſages are but Single Paſſages, or but in Pairs, whereas the Pores are Numerous; but the Paſſages of the Mouth and Noſtrils are the moſt Uſefull, and yet the moſt Deadly, for to receive in Air, and to let out Breath, which being ſtop'd, the Body Dies, being Over-power'd with Inward Vapour, and Hinder'd from Outward Air, for there is a Neceſſity, that one Creature muſt Live by an other, and Animals cannot Live without Air, although ſome think Fiſh do not, but I believe they do, for if Fiſh had no Air, they would Die, witneſs thoſe Fiſh that Die in Frozen Rivers.

PHI-

PHILOSOPHY.

PART VII.

CHAP. I.

Of the Natural Wars in Animal Figures.

ALL Animals after they are Created, and have an Animal life, their Figure is Inlarged by Nouriſhing motions, and Sympathetical matter; theſe Nouriſhing motions are Digeſting motions, carrying thoſe Parts, which are Received by the Senſes, unto thoſe Parts, that are Created therein, Building thereon, and Fitting therewith, Strengthning by Adding Thickneſs, as well as Inlarging by Extenſion; yet all that is Received into the Stomach, is not Nouriſhing, the Reaſon is, that the Temperament of the Matter is not Sympathetical, that is, agreeing not with the Motions therein; for though it is not ſo Antipathetical

to make an Open War, which War is Sickneſs, yet they do Hinder and Obſtruct, like Several Factions, thoſe Natural motions, which make Health; but when the Natural motions and Tempers of Humours are quite Oppoſite to the Food that is received, or the Unnatural humors bred in the Body, by Evil Digeſtion, they become Mutinous by the Quantity that is received, or that ariſeth from Obſtructions, whereupon there becomes a Feirce and Cruel Fight of Contrary motions, and Temperaments of Matter, and whilſt they are in the Battel, we ſay, the Body is Sick, and if the Natural motions be not Strong enough to Caſt that Evil and Dangerous matter Out, or at leaſt able to Reſiſt them ſo far, as to Guard themſelves, until the Evil parts do Spend themſelves with their own Fury, or till the Natural motions and Temperaments can have ſome Aſſiſtance, as Cordials, or Phyſick, it Deſtroys the Figure it Fights with; but if the Natural motions be more Powerful, either by their own Strength, or by the Help of their Aſſiſtants, than the Mutinous and Rebellious humours are, or the Forein Enemy, as Surfets, and the like, then the Diſtempers or Diſeaſes are Caſt out, Killed, or Taken priſoners, which is to be Purged, Corrected, or Purified, which makes the Humours Obedient and Peaceable.

CHAP. II.

Of the Motion of the Blood.

I Have heard, that the moſt Renowned and Learned Phyſician Doctor *Harvy* hath found out the Circulation of the Blood by his Induſtrious Studies and Obſervations in the Diſſections of Animal bodies, and it would be very Beneficial to the Health and Conſiſtence of Animal Bodies, if he had, or that other Learned men could find out the Motion of the Blood, as it runs in a Circular courſe, as whether it hath an Intermixing motion, as it Runs thorow the Veins, or whether the Blood doth not do, as Water ſeems to do, when it Runs in a Swift courſe, where the Following parts or Drops of Water are as great Strangers to the Leading parts of the Water, as the Situation of either Pole; for though the Hinder parts of a Stream or Flood of Water preſs the Former parts to run Forward, like as Crowds of People, ſome Shoving or Thruſting others before them, yet the Hindermoſt cannot get Paſſage, as to get Firſt, for a Single ſtrength is too Weak to paſs thorow the Strength of a Great, Cloſe, United Number; So Water, which is apt to Divide in Parts, and as apt to Joyn into great Swell'd Bodies, yet thoſe Parts do not ſeem to Intermix or Incorporate whilſt they Flow or Ebb, for if the Several parts ſhould Intermix as they Flow

or

or Ebb, their Intermixing motions would Hinder or Retard their Flowing or Ebbing motions, in ſo much, as the Flowing or Ebbing motions would not haſtily be perceived, neither could Flows and Ebbs be Changed or Repeated ſo ſoon, as we perceive they are; But if the Blood doth not Intermix one Part into another in its Circulation about the Body in the Veins, then ſome Veins may have Foul and Corrupted blood, and ſome very Pure blood, if ſo, when as an Animal, as a Man, is Let blood, if they light not on that Vein whereas the Corrupted blood is, they may take out the Pure and Incorrupted blood, and leave the Foul and Diſtempered blood in the Body, which Corrupt or Diſtempered blood may corrupt the Vital parts as it Runs in a Circular motion thorow thoſe Parts. This is the Reaſon, that many in Feavers, or any Diſeaſe that proceeds from the Diſtemper of the Blood, are never the better, when as they are Let blood, becauſe the Phyſician or Chirurgeon knows not, in which Vein or Part of the Body the Diſtempered blood is. Wherefore Phyſicians or Chirurgeons had better ſtrike two or three Several Veins in Several Parts of the Body, and venture the Loſs of ſome of the Good or Well-tempered blood, than let the Diſtempered blood Remain, leſt it may Corrupt the whole Body, not by Intermixing, but by Running or Flowing thorow all the Parts of the Body.

CHAP.

CHAP. III.

Of the Several wayes of Bleeding Phyſically.

THere are three Several wayes of Bleeding Phyſically, as by a Lancet, by Scarifying and Cupping, and by Leaches. The Bleeding by a Lancet I approve of Beſt, the other two wayes Worſt, for that way of Bleeding that is by Leaches and Cupping, doth for the moſt part more Hurt than Good, for they draw forth of the Body the Thinneſt part of the Blood, wherein the Pureſt Spirits (ſetting aſide the Arteries) are infuſed, and leave the Groſſeſt and Heavieſt part of the Blood behind; and it is to be obſerved, that the Pureſt part of the Blood is in the Artery Veins, the Groſſeſt Blood in the Middle Veins, and the Thinneſt Blood in the Hair Veins, wherein are more Spirits than in the Middle Veins, although much leſs than in the Loweſt Veins which are the Arteries; and for Proof, thoſe that Bleed either by Leaches, or Scarifying, are more Pale and Fainter than thoſe that Bleed by the Lancet, although the Blood be equal in Quantity; but ſome may ſay, that Leaches open the Middle Veins; I anſwer, they may do ſo, if the Hemorrhoid Veins be ſo High or Swell'd, as to be ready of their own accord to Open, but not if they lye Low, for a Leach cannot peirce thorow the Skin, and then thorow the Fleſh,

and

and lastly to open the Vein, as a Lancet can, for a Leach hath not strength to do it; and as for Scarifying and Cupping, it is but Skin deep, for though the Cupping Glasses draw, yet they make no Incision into the Middle Veins, and Scarifying is only on the Skin.

CHAP. IV.

Diseases caused by Conceit or Imagination.

AS for the Producing Diseases by Conceit, 'tis thus: The Sensitive motions, which are the Motions of Life, have an Absolute power over the Sensitive part of the Body, as Working every Part thereof, and therein; so the Rational Animate matter, which are the Motions of the Mind, Create Imaginations and Conceptions, and the Rational and Sensitive being as Man and Wife, the Rational as the Husband, the Sensitive as the Wife, whereupon the Rational many times Begets that Disease, or Figures, which is an Imagination, and the Sensitive brings that Child forth, being like the Figure of the Rational; and to Prove it, those that Conceit they shall have the Small Pox, Measels, Plague, or the like, most commonly they fall Sick of that Disease, although they come not near the Infection; and to prove the Animal Spirits which is the Mind, works the same Motions by an Imagination as the Disease is those which Conceit a Disease, do not fall Sick of any other

other Diſeaſe, but the ſame they Imagine; and the reaſon why theſe Malignant Diſeaſes are Produced oftner by Imaginations, than other Diſeaſes, is, that thoſe Diſeaſes are Dangerous, or that they are apt to Deform, which makes a Fearfull Conception or Imagination to Work more Strongly, for did the Imaginations work as Strong to other Diſeaſes as to theſe, they would Produce the ſame Effect.

CHAP. V.

Of the four Natural Humors of the Body, and thoſe that are Inbred.

AS there is Natural Fire, Air, Water and Earth, that is made by an intire Creation, derived from their own proper Principles, as likewiſe a Metamorphoſed Fire, Air, Water and Earth; So there are Humors in Animal Bodies, and in other Bodies, for all I can perceive, and though the Bodies cannot be Metamorphoſed, yet the Humors may. But in every Animal Body there is Natural Melancholy, Choler, Phlegm and Blood, the Natural blood is the Vital vapour, the Natural flegm is the Radical moiſture, the Natural choler is the Radical heat, the Natural melancholy is the Animal ſpirits, being the Higheſt Extract; and if we do but obſerve thoſe that be Naturally Melancholy they have the Soundeſt Judgement, the Cleareſt Underſtanding, the Subtileſt Obſerva-

tion, and Curiouſeſt Inventions, the Moſt Conceptions, the Fineſt Fancies, and the Readieſt Wits; likewiſe the Strongeſt Paſſions, and moſt Conſtant Reſolution; but Humors which are Imbred, as Flegm, Choler, and Melancholy, are made as Metamorphoſed Fire, Air, Water, Slime, Mud and Earth; as for Example, the Chylus is the matter that is Metamorphoſed; the Dilatating motions Transform it from Chylus to Slime, from Slime to Water, from Water to Blood, from Blood to Vapour, from Vapour to Comfortable and Lively heat, from Comfortable and Lively heat to Burning Feavers and Hectick Feavers, and the like. Likewiſe the Chylus by Contracting motions turns from Chylus to Slime, if they be Cold Contractions, it turns from Slime to Flegm, from Flegm to Heavy Melancholy; if Hot Contractions, it turns from Chylus to Temperate Choler, from Temperate Choler to Choler Aduſt, from Choler Aduſt to Melancholy, which turns from a Slimy humor to a Muddy humor, from a Muddy humor to an Earthy dry humor. Some ſort of Hot Contractions make it Sharp, ſome Salt, ſome Bitter; Likewiſe ſeveral ſorts of Salt, Sharpneſs, and Bitterneſs are wrought with Mixt motions; Cold Contractions make the Humor Glaſsy and Stony; Hot Contractions make the Humors Tough, Clammy, Glutenous and Stony; Hot Dilatations make the Humor Oily, Cold Dilatations Watery; Likewiſe mixt Motions make mixt Humors, and mixt Tempers

Tempers inclining to each Side, as the Motions predominate.

CHAP. VI.

The Four Natural Maladies of the Body, and Two Unnatural Maladies, one in the Mind, the other in the Body.

EVery Diſeaſed figure is either Pained, Sick, Diſſie, Numb, Weak. or Mad, ſometimes they meet all in one Figure theſe are Diſtinct Senſes one from another As for Pain, although every Several part of the Body hath Different ſenſe, yet they agree in the General, as to be all Pain. But Sickneſs is quite Different from Pain, for it is another Senſe, for to have Pain in the Stomach, is not to be Sick in the Stomach, neither is any Part of the Body, but the Stomach, liable to this Senſe of Sickneſs: the Head may Ake, and the Heart may Ake, Heel, or any Part of the Body, but none but the Stomach can be Sick; Indeed, it is a Different ſenſe from Pain. Thirdly, a Swimming or Diſſineſs in the Head are Different from both the other, it is a Third ſort of Senſe, neither is any other Part of the Body ſubject to this Diſeaſe, but the Head, yet Faintneſs or Weakneſs is a Diſeaſe as it were Tempered with the Three former Diſeaſes, as to have Pain, Sick, and Giddy, or a Swimming, to be Mixt or Compounded into One Diſeaſe, but it is ſo Mixt and Com-

pounded into all Three, as neither is Perfectly or Distinctly felt, so as it is no Distinct sense, this Disease is General to the whole Body. The Fifth is Madness, this Sense is neither Painful, nor Sick, nor Giddy, but Light in the Head, which is different from Giddiness or Swimming; but this Disease Infects with a Distemper the Five Outward Senses. The Last is a Numbness and Deadness of Particular parts, and sometimes of the Whole body, but this Disease is not onely a Different sense, but of another Nature, which is Unknown to the Figure, for the Figure is not any ways Sensible thereof, indeed it is of the Nature of Swooning, for those that Swoon, the Motions of the Animal Sense and Mind are quite Altered for a Time, but then the Animal motions Return that is Re-changed to the proper Motions again, so that those Dead parts, that cannot be Restored to the Sense of Touch, are, as it were, in a continual Swoon, for though in a Swoon the Exterior motions proper to the Sense of Touch be Changed, yet the Interior motions proper to the Consistence of that Figure are not Changed; for if the Interior Consistent motions were Changed, it would turn to a Dissolution, so in Dead palsies, if the Interior Consistent motions were Changed, those Parts would Corrupt as to Dead Carcases. Numb palsies are different from Dead palsies, as Fainting from Swooning, for Fainting is in the next Degree to a Swoon, so a Numb palsie is the next degree to Dead palsies. But there is a Sixth Malady,

Malady, that is somewhat of the Nature of Dead palsies, onely the one is in the Mind, as the other in the Body, which Sixth Malady is Natural Folly or Simpleness, which is of as different a Nature from the Nature of a Man's Mind, as a Dead body from the Nature of a Man's body; and those that are but Half Fools are, as if the Mind were in a Numb palsie.

CHAP. VII.

Of the Motions that make Sickness.

THe Motions that cause Sickness are different, according as the Sickness is, or rather the Sickness is according to the Different motions; for some Motions are like the Ebbing and Flowing Tides of the Sea, for the Humor Furdles or Folds Upwards, as the Flowing tide, which most commonly provokes to Cast, as Over-flowing the Mouth of the Stomach, but when the Humor Folds Backward, as the Ebbing waters do, that provokes to the Stool, for as Falling tides Run from one place, they Flow to another; So when the Humor falls back from the Mouth of the Stomach, it Over-flows the Belly, but if the Humor neither Over-flows the Belly, nor the Mouth of the Stomach, it Runs into the Nerves, like as the Water Runs thorow the Earth, and as the Water Breaks forth by Springs, so doth the Humor by several Rheums. Again, some Sorts of Sickness in the

the Stomach are made by ſuch kind of Motions as Water Boiling in a Pot, over the Fire; for as Ebbing and Flowing motions are Running Backward, and ſo Forward, ſo Boiling motions are Riſing Upward and Falling Downward, there is as much Difference in theſe Motions, as betwixt Vaulting and Running; but theſe Riſing motions cauſe Vapors to the Head, for the Thin parts, which Riſe higheſt, when their Riſing ſtrength fails, Fall not haſtily down again, but Gather to a more Solid Body, as Vapor from the Earth doth into Clowds; theſe Clowds cauſe the Dimneſs and Darkneſs of the Sight, Obſtructing the Light that is brought by the Optick Nerves. Again, there are other Sorts of Sickneſſes in the Stomach cauſed by ſuch Motions, as are like the Rolling of a Barrel, the Humor turning about in the Figure of a Barrel, which Figure, or the like, is ſomewhat Bigger in the Middle than the two Ends, this Humor in the Stomach is moſt commonly Tough and Thick, being more United, and ſometimes one End of this Humor is as ſet Upward, and the other Downward, and ſo Turned as a Barrel with the Head Upward, and ſometimes moved as a Barrel the Longeſt way on the Ground; theſe Motions cauſe neither Purging by Vomits nor Stool, but Thruſt out into Cold ſweats; for though theſe are not ſo Strong Dilatating or Expulſing motions as Over-flow, which forces to Vomit or to Purge, yet it Extenuates by Thruſting weakly out into a Faint ſweat;

ſweat; then there arē other Sorts or Sickneſſes, which are Cauſed by ſuch Motions, as if Meat were turning about on a Spit, for the Centre of the Humor removes not out of the place, although the Circumference turns about, this is a Conſtant Sickneſs, and the Stomach hath no Eaſe, untill the Humor is taken out of the Stomach by ſome Stronger Motions, as you would take a Spit from the Fire, or by Retentive motions, to hold the Humor from Turning; So there are millions of Several Motions, which make Several Sickneſſes in the Stomach, for though the Stomach can be but Sick, yet the Sickneſs is not alwayes after one and the ſame manner.

CHAP. VIII.

Of the Motions which cauſe Pain.

PAin is Cauſed not only by Irregular motions, but Croſs motions, or rather, as I may ſay, Jumbling motions, that is, Motion Beating upon Motion, or, as I may ſay, Running upon each other, Thronging and Juſtling each other; and Several ſorts of Pain in Several parts of the Body, are cauſed by Different, Croſs, or Beating motions, but if they be Dilatating motions, they Beat upon one an other by Shuffling Outward, like as Fooliſh Women do for Place, Tumbling upon each other to get Fore-moſt, thoſe Painfull motions turn to Sores and Putrifie, becauſe Dilatating

latating motions make Moiſture, and being Perturbed make Corruption; but if they be ſuch Contracting motions which cauſe Pains, they turn thoſe Parts that are Pained, to be Harder than Naturally thoſe Parts are, as the Stone, Dry Liver, or Brain, or the like; but if thoſe Pains be made of Mixt Motions, as ſome beat Inward, and ſome Outward, and ſo run Croſs, they are Hard Swellings, that extend to the Exterior parts, but will not Break, as the King's Evil, or Gouts that lie in the Fleſh, or Sciatica, and many the like; for though the Extenuating motions would Burſt out, yet the Contracting motions Keep in, and being both Equally Strong, neither get the Better for the Time the Pain is; and if the Pain be amongſt the Sinews, it is cauſed either by Contracting motions, or Dilatating motions, but not Mixt, but as it were Divided; for if it be Extenuating motions, the Sinews are Irregularly ſtretch'd too far; if Contracting or Attracting motions, they Irregularly draw, or pull, or gather the Sinews ſtrings too Short; if the Pains be in the Bones, they are only Croſs motions, as if one ſhould Run againſt the other, yet neither Shuffle Backward nor Puſh Forwards, being Equally ſtrong; if in the Fleſh they are Intangled motions, which make it incline towards Black, as to ſeem Purple, or Read or Black. And if the Pain be in the Skin, they are Pricking motions, as if a Needle ſhould draw a Thread in and out upon a Cloath, or the like; but in every Pained Part there is ſome

difference

difference in the Manner of Motions, although not in the Nature of the Motions.

CHAP. IX.

Of Swimming or Diſſineſs in the Head.

DIſſineſs and Swimming in the Head is made by Several ſorts of Motions, of ſuch Vapour as is Condenſed into Wind, if Wind be Condenſed, if not, it is Rarified Vapour turned into Wind, and the Agilneſs of the Motions therein cauſeth the Force thereof by an often Repetition, giving no time for a Repulſe; But howſoever Wind is made, either by Rarification or Condenſation, it is Wind moſt commonly, which cauſeth that we call a Swimming and Diſſineſs in the Head; for this Condenſed, or Rarified Vapour, which you will, when it is Expulſed, Flies Violently about, Carrying or Driving whatſoever is Bearable, Looſe, or Moveable, along or about with it, according to the Strength thereof; and if this Wind be in thoſe Veins, which Incompaſs and Run through the Brain, it Carries the Blood therein, with ſuch an Extraordinary and Swift motion about the Head or Brain, as it Carries the Senſes, as it were, along with it, which makes the Diſeaſed think the Brain turned Round in the Head, when it is only the Vapour that Wheels round therein, or about; but the Laſting ſtrength Waſting by the Violent Swiftneſs, brings but a ſhort

Trouble to the Diſeaſed, and ſeldome or never cauſes a Ruine, unleſs there be ſome Vein broken by the Violence thereof; but if it be a Windy Vapour in the Hollower and Larger Parts of the Head, it ſometimes will gather like a Ball, or like that we call a Spinning Top, which Spins about in the Brain whilſt it hath Strength, and when the Strength fails, the Spinning motion is done, and the Vapour diſperſeth, ſo the Diſſineſs ceaſeth; at other times thoſe Vapours will move like a Whirl-wind, moving Aſcendingly in Leſſer and Leſſer Circles, untill it brings a Circle to a Point, in the Shape of a Pyramide; and when the Strength abates, or that it Breaks it Self againſt more Solid matter, the Vapour diſperſes, and ſo Expulſes; but this Sort of Motions is ſo Violent, as it cauſeth the Diſeaſed to Fall, but ſoon to Recover, for what is Supernaturally Violent, cannot laſt Long.

CHAP. X.

Of Weakneſs.

SWooning is cauſed by the Obſtruction of the Spirits, or too great Evacuations, or when any thing Suppreſſes, or Laies Siege to the Heart or Head, they being the Magazine of the Life of the Body, wherein the leaſt Diſorder is like Fire to Gun-powder; Weakneſs is cauſed by a too much Relaxing of the Sinews and Small Fibres

Fibres of the Body, which are like Laths to a Houſe, and Fleſh, like the Mortar laid thereon; the Bones like the ſtrong Timber Rafters and Beams therein, which when the Mortar is worn of, the Laths are apt to Looſen; ſo when the Body is Lean, the Fleſh is Waſted, the Sinews are apt to Slacken. Again, ſome are Weak, by reaſon the Sinews are Boil'd too tender, as too much towards a Jelly, which the Body will be after Moiſt Extenuating Diſeaſes, as after Extraordinary Sweatings, Small pox, Meaſles, or the like, or in Hydropical diſeaſes. Weakneſs is in a Degree to Death, as being towards a Final or General Expulſion of the Figure.

CHAP. XI.

Of Numb and Dead Palſies.

A Dead palſie is not onely made by Miſtempered matter and Diſordered motions, but by Unnatural motions, as Improper to the Nature of that Kind of Figure, Working or Miſ-working moſt commonly upon the Exterior parts, Drawing up, or Shutting cloſe thoſe Paſſages that ſhould be Open, working by Contrary motions from the Nature of the Figure, which cauſes Inſenſibility, but as long as the Vital parts be Untouched, which are the Stewards and Truſtees to the Life of the Body, which are to Diſpoſe, Diſcharge, and Direct,

to Take in and Lay out for the Subsistence of the Body, as I may say; as long as these are Untouch'd, the Life and the Body may Subsist, although the other Particular parts be, as we say, Dead, or Lost to the Natural use of the Body. A Numb palsie is of the same Nature, but not of the same Degree; as for Comparison, a Dead palsie is, as if a Door, for common and necessary Passage, should be Close shut, and Lock'd or Nail'd up; and a Numb palsie is, as if the Door or Doors should be Half open, and according as it is Open or Shut, the Numb palsie is More or Less; but both Dead and Numb palsies are occasion'd by some Unnatural Contractions, for if it were by some Unnatural Expulsions, the Parts Infected would Rot, and fall from the other Parts, as Gangrenes, which certainly are caused by such kind of Unnatural Expulsions, as Dead palsies are of Unnatural Contractions. Thus we find by Experience, that they are Unnatural Contractions, that cause Dead palsies, because they do not Rot. Wherefore in the Diseases there must be applied Opening medicines, that work Dilatively, and if they be caused from a Cold contraction, then Hot Dilatating medicines must be applied, but if they proceed from Hot contractions, the Cold Dilatating medicines must be applied; But the Difficulty and Skill will be to find whether they proceed from Cold or Heat, although most commonly all Physicians do apply in these Diseases very Hot and Dry medicines, which are Con-

Contracting, which Medicines are quite Contrary to the nature of the Diſeaſes, which makes them Cure ſo few, but the ſureſt way is to Apply Dilatating medicines, whether Hot or Cold.

CHAP. XII.

Of that we call a Sleepy Numbneſs.

A Sleepy Numbneſs is alſo cauſed by Obſtruction or Stoppages; as for Example, if any Over-burthenſome Weight lies upon the Arm, or Hand, or the like, it will become Numb, which is Vulgarly called Sleepy; the reaſon is, that Preſſing too hard upon thoſe Parts, we Stop the Pores, which ſhould receive Touch, for if the Pores be cloſe Shut, Touch cannot enter, no more than if the Eye be ſhut, an Outward object can enter, or ſtopping the Ears or Noſe, a Sound or Sent can enter, as we may find by Experience, for if any part is Bound too hard, it ſtraight becomes Numb; likewiſe by a violent Blow; the Reaſon is, the Striking or Thruſting back the Blood; for the Blood is like a Running company, which when they are Forceably beaten back, on thoſe Companies that are Thruſting forward, Unite by Contraction into ſo Firm a Body, that no Particular part can ſtir, which Solid and Thick body ſtops the Pores of the Fleſh, and the Running Motions in the Veins; but alſo, as we give Liberty by Unbinding,

binding, or by Taking off Weight, or by gently Rubbing, to Open the Pores, and Disperse the Blood, it is Cured. Likewise the Sleepy numbness may proceed from a Superfluity of Vapor, which flying to the Pores for Vent may stop the Passage by too great a Concourse, being more Vapor than sudden Vent; but any Alteration of Motion cures it, by Dispersing the Vapor more Thin and Evenly.

CHAP. XIII.

The manner of Motion or Disorder in Madness.

THe Motions that make that Extravagancy we call Madness, is as a Carver or Painter, Ingraver, Printer, or the like, should place the Figures they work the Wrong end Upwards; or as if Mathematicians should draw a Platform, and should make a Square, where a Circle should be, or should put Equal Weights in Uneven Scales, or set False numbers; or make False measure; or as a Painter, Printer, Carver or Graver, should Paint, Print, Carve or Grave a Bird's head to a Lion's body, or if a Painter should Draw Feathers on Beasts, and Hair on Birds, or the like; Indeed, a Sensitive madness is like Dreams in Sleep, onely the Sensitive motions work in Sleep, as I have described before, on the Inside of the Sensitive dores, and when Awake on the Outside; and in Sleep

Sleep they be wrought without a Pattern, and Awake by a Pattern from the Real Figure, which they Preſent; and the Differences in Madneſs are, that they Work by Rote without the Real Subjects on the Outſide of the Senſitive Door, as if Awake, although there are no Objects to take Pattern from, as we may perceive by them that are Diſtempered, that they See ſuch Objects that are not Preſent, or ſuch as never were, or can be; and ſo the like for Sounds, Taſte, Touch, and Smelling, that is, the Senſitive motions Paint, Print, Carve, Grave, or the like, as on the Outſide of the Optick Nerve, without a Real Pattern, and when the Senſes work Regular, they never Draw on the Outſide without a Pattern, but on the Inſide, as in Sleep, and the like for all the other Senſes. But the Motions of the Rational Madneſs are when they move Violently and Irregularly, if the Motions be only Violent, then they Fall into Violent Paſſions, as Anger, Fear, Malice, or Loving, Hating, Grieving, Diſpraiſes, and Reſolute Intentions; if their Motions be Irregular, then they have Strange Conceptions, Wild Fancies, Mixt Memories, Inconſtant and Various Opinions; if their Motions be Violent and Irregular, they have Strong and Strange Imaginations, High Deſpairs, Obſtinate and Dangerous Reſolutions; if the Senſitive and Rational Animate matter Sympathize in Violent Irregularity, then they will Violently Talk, Laugh, Sing, Weep and Sigh, without reaſon why,

why, or wherefore; but miſtake me not, for when I ſay too Violent, Strong, Swift, Weak, Slow, it is Irregular, as to the Temper or Nature of the Figure, but not as to its own Nature; as for Example, a Clock may go too Swift, as to the diſtance of the Hour, and yet Strike Even every Nick; and the Pulſe may be too Swift for the Natural Temper, and yet keep Even Time; a Muſician may Play too Faſt for a Solemn Tune, and too Slow for a Light Air, and yet Play Right to the Notes; as for the Irregularity, ſome Motions may be too Swift, others too Slow, for other Aſſiſtant motions; as for Example, an Army is to March in a Body, and ſome ſhould Go or Ride half a Day, or a Daies Journey before the reſt, and ſome ſhould Lag and come Slowly behind, or that ſome ſhould Go one way, and ſome another; or as two ſhould Carry a Burthen, and the Hindmoſt ſhould go too Faſt for the Former, and ſo Tumble or Throw down; or as Horſes in a Coach, the one Runs away, and forceth the other to Follow; as for Diſorder, it is ſomewhat otherwiſe, as Tumults and Uproars, as ſome doing that which they ought not to do, or belongs not to them, or inſtead of Guarding a Houſe, Pull it down, or like thoſe that will make a Fire in the midſt of the Houſe on a Wooden Floor, and not in the Chimney; then there is a Diſorder in Placing and Matching of Parts, and Alterations of Motions, quite Different from the Nature of the Figure, for ſome Sort of Madneſs is made by

ſuch

such Different motions, as Death, from that which we vulgarly call Life, that is, the Motions are as Different as Several kinds of Figures; for in this Kind of Madness, they no more Know In their Fits, or Remember Out of their Fits, what they Did or Said, or was Done to them in their Fits, then if they had been Dead; Just as in a Swoon, they know not what was done to Restore them; yet there is not a Cessation of Motions, neither in the Sensitive, nor in the Rational, but an Alteration of Motion; 'tis true, there is for a Time a Cessation of such Sorts of Motion, as belong to the Natural Health of the Figure, but not to the Life.

CHAP. XIV.

Of Madness in the Body and Mind.

THere are two Sorts different in Madness, the one is Irregular motion in the Rational Animate matter, the other in the Sensitive Animate matter, as Mis-placing, Ill mixing, Distempering, False Carving, Wrong Printing on the Inanimate part of matter, as in Feavers, or the like Diseases, where the Distempered matter is Mis-placed, which Improper motions alter the Natural motions, which make the Natural Temper, and Causes an Unnatural Temper by Improper motions, working upon every Particular Sense Irregularly, or rather Improperly, and Mixtly, which makes Extravagancies both

in each Particular Sense, and in the Generality; this Madness proceeds from the Sensitive, and not from the Rational Animate matter, for the Rational part will be in Order, and describe Distinctly what Extravagances the Sense presents to them; but this Madness of the Body is oft times mistaken, and thought to be the Distemper of the Mind, because the Sick Persons describe those Extravagancies by Relation, yet oft times the one Causes the other, but not alwayes, for many times the Mind will be Disordered, when the Body is Sound and Healthfull, and many times the Body will be Distempered, when the Mind is Regular and Free; but the Madness of the Body only Continues to the Height of the Disease, and as the Disease Abates, the Extravagancy Fades, and by Health Vanishes away, or rather is Rubbed or Worn out, by the Regular and Proper Natural motions belonging to that Figure or Body; but the Madness in the Mind proceeds from Irregular motions in the Rational Animate matter, as when they neither keep Time nor Measure, not only in making Figures, but in moving those Figures they make; this Distemper, or rather that Disorder, is altogether in the Moving matter, when the other Distemper is in Disordering the Moved matter, for the Sensitive Animate matter may Work Regularly, according to the Nature and Strength, but not according to the Temper or Degree of the Inanimate matter, nor according to the Nature and Property of the Kind or Sort

Sort of Figure; but when the Senſitive and the Rational joyns in Conjugal Diſorder, the Mind is Raving, as we ſay, and the Body Weak. The beſt Remedy for Madneſs is Temperate Diet, but not ſo Spare as to Dry the Body too much; as alſo Diet-drinks, but not Drying Diet-drinks; alſo Purging with Hellebor, but eſpecially Bleeding, firſt in the Fore-head or Temple-veins, next under the Tongue, and at laſt in the Legs. But the beſt is to make Iſſues in the Inſide of the Thighes. Some approve of Leaches, but I do not. As for the Madneſs of the Mind, which makes no Diſturbance in the Senſitive matter or motions, the beſt Remedy is Gentle perſwaſions, Kind expreſſions, and Harmonious muſick.

CHAP. XV.

Madneſs is not always ~~about~~ in the Head.

MAdneſs belongs not always to the Head, as that onely the Eye, Ear, Noſe and Mouth Sees, Hears, Smells and Taſtes Extravagantly, but every other Part of the Body that is ſenſible of Touch; for Extravagant Touch is as much as Extravagant Sight, and the like; for Touch of the Breaſt, or any other Part of the Body, is a Senſe, as much as the Eye in the Head; thus the Body or Senſes will be Mad as well as the Mind, as I have deſcribed in former Chapters. Likewiſe for the Madneſs in the Mind, it is not

always bound in the Head; for where there are Extravagant passions in the Heart, the Mind is as Mad, as when there are Extravagant imaginations in the Head, for the Rational matter, that which we call the Soul or Mind, is as much, and hath as much Recurse to the Heart, as to the Head, and so to the other Parts of the Body, for any thing I can perceive.

CHAP. XVI.

Musick may Cure those that are Mad in Mind.

THere is great reason why Musick should Cure Madness, for the Mind, for this sort of Madness is no other but the Rational matter and motions that are in the Brain and Heart, put out of their Natural motion, and the Rational matter and motions having a Natural Sympathy with Musick, may be composed into their Right order, but it must be such Musick, as the Number of the Notes must go in such Order as the Natural motion of the Brain, though every Brain hath not one and the same Motion, but are set like Notes to several Tunes: Wherefore if it were possible to set Notes to the Natural motion of the Heart, or that Brain that is Distempered, it might be perfectly Cured; but as some Notes do Compose the Brain by a Sympathy to the Natural motion, so others do make a Discord or Antipathy, and Discompose

Diſcompoſe it, putting the Natural motions out of Tune.

CHAP. XVII.

Of Natural Fools and Idiots, alſo of Deaf and Dumb Men.

NAtural Simplicity is not produced as Madneſs, for Madneſs is onely an Irregularity of ſome Sorts of Senſitive and Rational motions, and Miſtempered matter; but to be a Natural fool is by Unnatural motions, or a Defect in Creation and Birth, either cauſed by the Senſitive motions in the Architecture of the Body, or a Scarcity of Rational matter, or Irregularity of motions in the Creation or Beginning; But ſome that have been born Perfect according to their Kind, yet in their Old Age become Idiots or Fools, which we name Dotage; This Defect is cauſed by the Weakneſs and Decay of the Body, and ſo of the Mind; for though a Man in Age have all the Parts of his Body Sound, and nothing Diminiſhed, yet the Senſitive motion is working this Body to ſome other Figure, which cauſes his Senſes to be Imperfect, and his Body Weak; The like doth the Rational motion in ſome Bodies, changing their Motions, which are Natural to that Figure, as Man, to ſome other Figure, that Man is ignorant of; Sometimes they Change by Degrees, as from Full growth to Old Age, and ſometimes they

they Change on a Sudden, and ſome ſooner, and ſome a longer time ere thoſe Natural motions change; but in Death there is a thorow Change and Alteration both of Senſitive and Rational, whereas in Decays but ſome Change or Alteration is made. But this is to be obſerved, that the Rational matter and motions do not at all times in the Courſe of a Man's Life Change with the Senſitive, but many times the Weaker the Body is, the more Lively and Agil is the Mind, as may be obſerved, that Weak Diſeaſed-bodied Men will have very Quick Wits, Ready Memories, Solid Judgments, and Clear Underſtandings; The like in Age, for ſome Old men will not onely be Wiſer than ſome Young men at Full growth, and Vigour of Strength, through Long experiences, but their Memory will be more Ready, and their Wit Freſher, and their Fancy more Elevated, than thoſe Men in their moſt Flouriſhing years or Times of their Life; for ſome Men's Rational parts and motions never change from the Nature of that Kind or Sort, as Man, until a Total change, which Total change is Death, ſo that all Old men are not Dotards, or Idiots, or Fools, but ſome Few, and ſo few, as not an Old Man amongſt many, although an hundred years old, will be ſo Changed: As for thoſe Idiots or Fools that are made ſo by Hurts in the Head, the Violent motions muſt of neceſſity Change or Alter theſe Rational Natural motions that belong to the Head; and thoſe that are made Fools by

by great Frights or Fears, are ſo, by reaſon in that Exceſſive Paſſion, the Rational matter and motions were ſo put out of Order, as this Diſorder cauſed ſuch a Change, as to Alter their Natural motions to Unnatural motions, which are not Proper to the Figure of Man; the like in ſome Sorts of Sickneſs, or by Long Sickneſs; but the only Difference is, that in Sickneſs the Senſitive motions have Diſordered the Rational, but in great Frights or Fears the Rational matter and motions hath Diſordered it Self. But to conclude this Chapter, there is, as I ſaid formerly, great Difference between Mad men and Fools, for Madneſs is only an Irregularity of Rational motions, but Fooliſhneſs is Unnatural Rational motion, I mean Unnatural, as Improper to the Nature of the Figure or Creature, namely Man; as for thoſe that are Born Deaf and Dumb, they are not Natural Fools, nor Accidental Fools, unleſs their Minds be as Defective as their Body, otherwiſe they are for the moſt part very Ingenious to help the Defects of their Body by the Wit of their Minds, for they will Conceive and Inform by ſigns Ingeniouſly, and certainly, were they not only Deaf and Dumb, but Blind alſo, yet they would have both Thoughts, Paſſions and Conceptions, and thoſe Thoughts, Paſſions and Conceptions would be Regular and Rational according to the Kind and Nature of their Figure, the only want would be, that their Rational part would want the Variety of Outward objects to Move or Work on, which

which is to take Patterns from; alſo they would want thoſe Paſſions, that were Produced from Outward objects.

CHAP. XVIII.

Of the Fundamental Diſeaſes.

THere are many Several ſorts or manners of Feavers, but there are three Chiefly to be taken notice of, from which three all other Feavers are partly Derived; The firſt is a Malignant Feaver, the ſecond a Hectick Feaver, and the third an Ordinary Burning Feaver: the firſt is Catching, and often Deadly, the ſecond is never Catching, but alwayes Deadly, the third is not Catching, and ſeldome Deadly; the firſt Proceeds from Violent Diſordered motions and Diſtempered matter and humour; the ſecond from too Swift Interior motions and heat, which Diſtemper and make Waſte of the Matter, by which Matter, I mean the Subſtance of the Body; the third is too Violent Motions on Well-tempered matter. And theſe three Sorts of Feavers are often mixt, as it were a Part of each mixt into one; but an high Malignant Feaver is a Sudden Uſurpation, for the Diſordered motions joyned with a Miſtempered matter, which is Corrupt Humors, Surprize the Body, and Deſtroy the Life therein, as we ſhall ſee in great Plagues, the Body is Well, Sick and Dead in a moment; Theſe or the like Diſeaſes are Cauſed

Caused after three manner of wayes, as being taken from Outward Infection, or bred by an Evil Habit in the Body, or by taking some Disagreeing matter therein, which causes a War of Sickness; for upon the Disorder which the Disagreeing matter makes the Natural motions belonging to the Body, grow Factious, and like a common Rout arise in an Uproar, which strives only to do Mischief, Stopping some Passages that should be kept Open, and Opening some Passages that should be kept Shut, hindering all Regular motions from Working after that Natural manner, forcing those they can Over-power, to turn Rebels to the Life of the Body; For it is against the Nature of the Animate matter to be Idle, wherefore it Works rather Irregularly, than not Work at all; but as long as a Body lies Sick, the Power is Divided, one Part of the Animate matter working Irregularly, the other according to the Natural Constitution, which by the Regularity strives to Maintain the Chief Forts of Life, which are the Vital parts, especially the Heart, and Disordered motions striving to Take or Pull them down, making their Strongest assaults thereon; for the Disordered Animate matter makes Outworks of Corrupted matter, Stopping as many Passages as their Power will give Leave, so striving either to Starve the Vital parts, or to Oppress them with Corruption, or to Burn them by their Unnatural Heat they make in the Body, or to Drown them with Waterish humour,

which is caused by the Distemper of ill Digestions and Obstructions; the Regular Animate matter Strives to Break down those Works, and to Cast and Expell that Filth out of the Body, and according as each Party gets the Better, the Body is Better or Worse, and according as the Siege Continues, the Body is Sick, and according as the Victory is Lost or Won, is Life or Death.

CHAP. XIX.

Of Spotted Feavers, especially the Plague.

THose Diseases that are named the Purples, or Spotted Feaver, and Plague, are not only caused by a Superfluity of Humours, or a Corruption of Humours, but an Inflammation of the Vital parts, and Vital spirits, as also of the Loose humours, as Blood and Choler, which for the most part causeth a Total ruine of the Whole body, and where one Patient Lives, Hundreds Dye in those Violent Diseases; And as for the Disease of the Plague, when that Disease breaks out into Round, Dark, or Bloody Spots, it is a sign of a Certain Death, for I never Heard that any Lived after those Spots were in the Flesh, those Spots showing a Total Infection throughout the Body, and Parts of the Body; yet I am of an Opinion, that there be Cures or Remedies if they were Known, for though those Diseases will make themselves Known by

by their Sick or Deadly Effects, yet Remedies are Obscure and Difficult to be found out; but certainly the best Remedy for all such Corrupted, Malignant, Fiery Diseases is Vomits, which take out all Foul and Corrupted Malignant humours, and then to Let blood in Several Veins in Several Parts of the Body, and then to give the Patient Cooling Ptisane, and after some Recovery to Purge and Bleed again; but as for the Spotted Plague, the Patient Dies Immediately, as soon as the Spots Appear, or in few Hours after they Appear; but were I so diseased, if I had any time of Life, as three or four Hours, I would Bleed in many Several Veins at One time, especially those Veins under my Tongue; for those Veins do most generally Draw from all the Parts of the Body; also I would be Let Blood in my Arms and Legs immediately after those Mouth-veins, for if any thing will Cure a Spotted Plague, it must be by Sudden and Extraordinary Evacuations, because the Disease is Violent, and causes a Sudden Destruction. But it is to be observed, that those Diseases that are generally Deadly, the general Opinion is, there is no Cure, and so will never Make or Try Experiments; also in those Diseases that are generally Infectious and Deadly, few will come near those that are Sick, no not Doctors, Apothecaries, Chirurgeons, or the like, without Unreasonable Fees, wherefore the Poorer sort, or the Middle sort, and some of the Better sort,

which have not enough wherewith to satisfie their Covetousness (for as for Charity or Compassion, there is little of it in the whole World) often Die for want of Regarding. But in Spotted Feavers, the best Remedy is to Bleed Moderately, and then to Vomit; but in Spotted Plagues 'tis best to Bleed so much, as to Faint for want of Blood, for it is better to Live with a Little blood, than to Die with Too much or Too Inflamed blood, and after some little time of Strength, then to Vomit and Purge; but to Prevent those Diseases in Infectious Seasons or Regions, is to Cleanse the Body by Vomit and Purges, and to Empty the Veins by Opening some; for when as there is but Few Humors in the Body, the Malignity hath Little or nothing to take hold of, although most Physicians prescribe Men to Feed much, to keep out the Malignity, as also Hot cordials and drugs to keep out the Malignity, but I am of another Opinion, for I would advise Men in such Malignant Times, or Climates, or Houses, or Companies, to keep Spare Diets, and neither Too Hot nor Gross, nor Hot Cordials by no means; but some Sorts of Sents or Smells are Good, as Burnt Pitch, Tar, Benjoim, Storax, Tobacco, and the like; also to Take Tobacco is not Unwholesome, but very Good, for it doth help to Avoid, both by Spitting, and otherways opening the Body to Vent much Superfluous matter out of the Body and Head; as for that Sort or Degree of the Plague, as onely breaks forth

forth in Swellings and Running sores, Vomiting is the onely Inward Remedy, and Attracting Salves and Poultesses laid to the Sores, the Outward; for those Patients that have Sores or Swellings are not so Deadly Infected as those that are Spotted; but this is to be observed, that Swelling Plague-sores proceed more from Corrupted humors, than from Inflammations of Humors and Parts. But in all Malignant diseases, Expelling medicines are best, which Expelling medicines are not of a Hot and Dry nature, for whatsoever is Hot and Dry, is either Contractive or Retentive, which Contracting and Retentive effects are Dangerous, if not Deadly, wherefore Dilatating medicines, which are Interiously of a Moist nature, are best, whether a Hot or Cold moisture, for all Interior moistures have a Fluid or Flowing Faculty or Propriety, Working and Moving like the Nature of a Flowing Tide, whereas Drie medicines, which are Contractive, are like as the Ebbing tide, that draws Backward or Inward.

CHAP. XX.

Of the Disease named the Small Pox and Measles.

THe Small pox, Measles, or any such Disease that Dilatates from the Inward parts to the Outward, their Causes are Diverse in each Single disease; but for that Disease, namely, the Small

Small pox, as alſo that Diſeaſe, which is much like the Small pox, namely, the Meaſles, they proceed for the moſt part from an Overflow of Corrupted humors, thoſe Corrupted humors are apt to Oppreſs or Infect the Vital parts on the Body, unleſs the Regular motions and Well-tempered parts are ſo Strong to drive thoſe Corruptions from their Aſſaults, for thoſe Corruptions endeavour to Deſtroy all thoſe Parts they can take hold of; but many times two Diſeaſes joyn together, as a Feaver and the Small pox, or a Feaver and the Meaſles, both of which joyning together, as the Feaver and Pox, the Vital parts, and Regular motion in thoſe Parts in the Body are oftner Over-come and Deſtroyed by thoſe two Powerful diſeaſes joyned into one Strength, than they have Victory, unleſs there be Applied very Effectual Remedies, which Remedies do aſſiſt the Vital parts and Regular motions; but in thoſe Diſeaſes muſt be great Moderation uſed, in Applying Remedies, that are neither Too Hot nor Cold, either Exteriouſly or Interiouſly, as not to Cover or Cloathe the Patient Too Hot, or to give him Too Hot medicines, either Actually hot, or Virtually hot, for fear of increaſing the Feaver; yet many Phyſicians do give their Patients in thoſe Diſeaſes very Hot Cordials to drive out the Malignity, but they do not Conſider, or otherwiſe are Ignorant, that all Hot Cordials are not Dilatating, but ſome are Contracting, for all Hot motions do not Dila-

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tate, but contrarily Contract, for there are Hot Contractions, and Hot Dilatations, and Cold Contractions, and Cold Dilatations, but in those Diseases, all Contracting Medicines or Cordials, whether Hot or Cold, are Destructive, for these Contractions Keep in the Malignity, and Unite the Corruptions and Superfluities into a Strong Body or Quantity, which Overpowers the Vital parts and spirits; and if those Medicines or Cordials be indued with Hot Contractions, they Assist the Hot and Feaverish Distempers, wherefore Dilatating Medicines are best, and such Dilatating Medicines, Cordials, or Foods, as are of an Equal Temper, as neither too Hot nor too Cold; yet Cold Dilatations are better than Hot Contractions, and Hot Dilatations better than Cold Contractions, for Dilatations of what Temper soever, are better than Contractions of any Degree or Temper; yet this is to be observed, that if Diseases be Driven or Forced to the Exterior parts too Violently, they may Fall back Deadly, for one Extreme is apt to turn to the contrary Extreme; but the best Remedy in those Diseases, is, to give the Patient warm Posset Drink made of Small Beer, or Wine and Water, and a little Saffron and Licoris boyled together in that Liquor, and to let him take no other Food, untill the Pox or Measles are come so much forth of the Flesh, as not to fall back into the Body, and if there be a Feaver, to Let him Blood, but not if the Patient hath not a Feaver, for as Opening

a Vein will be a Remedy, if the Patient be in a Feaver with the Small Pox or Meaſles, ſo it may prove a Deſtruction to the Life of the Patient, if he have not a Feaver, for if the Patient have no Feaver, Letting Blood will Strike in the Pox, by Drawing back the Corruptions through the Veins, and if the Patient have a Feaver, Opening a Vein will Draw out the Feaver from the Body through the Veins, and with the Feaver the Malignity.

CHAP. XXI.

Of Expelling the Malignity to the Outward Parts of the Body.

THe reaſon why in Malignant Diſeaſes, as the Plague, or Purples, or Small Pox, Meaſles, or the like, there break forth Spots, Swelling Scabs, or Whelks, is by the Power of Expelling motion; but the reaſon why it Sticks in the Fleſh, and not quite Out, is, becauſe the Regular motions that maintain the Health and Strength of the Body are Oppoſed by Diſorderly motions, which makes Corrupt matter, that makes Diſordered motions, for though there can be no Corrupt matter, but what is cauſed from Diſordered motion, yet when the Humours of the Body are once Corrupted, the Motions are more Violent; again, Superabundant Humours cauſe Diſordered motions, for as there is too much Humour obſtructing the Body

Body therewith, ſo there is too much Motion to work Regularly therein, and being againſt the Natural Conſtitution to have ſo much Humour and Motion, it produceth Violent Sickneſs, working to the Deſtruction, and not to the Maintenance of the Body; but the Regular motions, which are Digeſtive motions, which Unite, Strengthen and Defend the Vital parts, by Attracting good Nouriſhment, by Retaining the Uſefull Parts, by Concocting it into a Solid Subſtance, by Expelling of Superfluities or Malignancy out of the Body after a Methodical manner; and according as the Strength of Expelling motions is, ſo is the Malignity caſt forth, for if the Repelling motions be Stronger than the Expelling motions, the Malignant preſſes ſo Hard upon the Vital parts, as it Smoothers the Life therein, or Burns up the Materials thereof; Again, the Expelling motions may be ſo Weak, as they cannot Thruſt out the Malignity ſo far as the Circumference of the Body, which is the Skin, or if ſo far, yet not to Stay there ſo Long as to Evaporate it, and then the Malignity falls back with a Greater Violence; for what is Forced and Reſiſted, when once it hath Liberty, or gets Power, it becomes more Violent, by how much more it was Forced; but that Malignity, that doth Evaporate forth, doth inſenſibly Enter into the next Body it meets, Entring through the Noſtrils, Mouth, or Pores of the Fleſh; and thus many times from Animal to Animal, untill there is a General Infection,

which is a General Diſorder, for the Malignity that Enters in by Infection, is like a Forein Enemy, which Enters into a Peaceable Country, which not only Diſorders it, but makes Havock and Waſte, and many times utterly Deſtroys it; but when a Malignant Diſeaſe is bred in the Body, it is like a Civil War, where Uproars are Raiſed, and Out-rages are Done by Imbred Corrupt Humours; but when Malignant or other Diſeaſes are cauſed by Surfeits, it is like a Deluge of Fire or Water, that either Drowns or Burns up the Kingdome of the Body; where ſometimes it is Saved by Aſſiſtant Medicines, and ſometimes it is ſo Furious, as nothing can Help it.

CHAP. XXII.

Of Hectick Feavers.

AS for Hectick Feavers, they are for the moſt part cauſed through an Exceſſive heat in the Arterial blood, which Heat is more difficult to Quench, than to Stop a Prick'd Artery; and as an Hectick Feaver hath an Exceſſive Interior Heat, ſo it hath an Exceſſive Interior Drineſs, which Drineſs is for want of Radical moiſture, for the Unnatural heat hath Deſtroyed the Natural moiſture, and as the Unnatural heat hath Deſtroyed the Radical moiſture, ſo it hath Deſtroyed the Radical heat, for Radical heat Lives in the Radical moiſture, both of which is the Natural

Natural Oyl and Flame of the Body; thus the Unnatural heat hath Deſtroyed the Natural heat and moiſture, like as Fire will Burn out the Strength or Spirits of Cordial water, or Evaporate Oyl into Smoke; but the Unnatural heat Waſtes the Natural moiſture; for it is to be obſerved, that thoſe Patients that have a Hectick Feaver, become in time to have that Diſeaſe, nam'd a Dropſie, I will not ſay All Hectick bodies have Dropſies, but Moſt have, eſpecially if the Body hath been a Long time in a Hectick Feaver, or ſome Patients will have an Hectick Feaver ſome years, before it Deſtroys them, and as the Body Waſtes, all the Interior motions Change into Expulſive motions, and the Way or Beginning of Expulſions is Dilatation, which Dilatation cauſes the Denſe parts to be Rare, and ſo Liquid and Wet. Thus it is to be obſerved, that Hectick Feavers are firſt made or produced from Hot Unnatural Contractions, then to Unnatural Dilatations, and at laſt Deſtroying Expulſions; as for Remedies, there is none, but ſome Retarding or Staying of Sudden deſtructions may be found or applied to the Patient, but no Perfect Cure, for a Hectick diſeaſe is ſuch an Interior diſeaſe, that not any Exterior remedy can be Applied as to Cure it. But the Patient muſt not uſe any Violent exerciſe, nor Eat any Salt meat, or Meat of Hard digeſtion, or of a Drying temper, or Drink any Strong drink, or Take any Hot Cordials, for Heat and Drineſs is too much of the Nature of the Diſeaſe, where

Cold and Moist remedies are best, as Cooling Broths and Julips; also their Meat must be Fine meat, and such as is of a Moist nature, as Fat Chickens, Capons, Young Sucking Rabbats, Piggs, Young Lamb or Veal, or the like; for all Young meat is of a Moist nature; As for Fish, although many Sorts of Fish are Cooling, yet most Sorts of Fish are of a Drying nature, which Drying effect is very Hurtfull for this Disease; but of all Fish, Carps are of the Moistest nature; but it is to be observed, that more than Ordinary Evacuations are Dangerous, because they Dry the Body by Emptying it, for the Humours serve as Oyl, for though they should Flame with Heat, yet they help to Keep in the Light of Life, for if the Unnatural heat hath nothing to Feed on, it will soon Consume it; and though Fasting, Dries the Body, yet the Diseased Patient must not Eat more than he can well Disgest, and rather Eat Often, than much at One time. I say often, Thrice a Day, as in the Morning, at Noon, and at Night, for though many do Eat Four times a day, yet those that Eat but Once a day, think Thrice too often.

CHAP. XXIII.

Of Ordinary Feavers.

A Feaver is caused by Corruption of Humors, or Obstruction of Humors, or having too many Sharp or Bitter humors, or the Boiling

ing of the Blood; as for Corruptions of Humors, they are cauſed by the Irregularity of Diſgeſting motions: the Obſtruction of Humors or Parts is cauſed by the Irregularity of Contracting motions; the Boiling of the Blood is cauſed by too many Dilatating motions; as for Sharp and Bitter humors, which is Melancholy and Choler, if there be more than the Watery or Phlegmatick parts can Equalize, ſo as to keep them in a Right and Equal temper, they ſet the Body Afire, for Melancholy is of the Nature of Vitriol, and Choler of the Nature of Oil, Salt phlegm is of the Nature of Sea-water, and Sweet phlegm of the Nature of Freſh-water, the Blood is of the Nature of the Air, which is Groſſer or Purer, according to the Agitation which ſpreads all over the Body, and Dilatates into every Part of the Body, I cannot ſay, into the Nails and Hairs, for thoſe are eſteemed or accounted of but as Excrements; but theſe Several Humors and Blood, when as they are Diſtempered by Irregular motions, or when as any of them is Superabounding, they make a War in the Body, and when the ſeveral Humors or Blood moves in Fiery motions, the Body is ſaid to be in a Feaver; wherefore the onely Cure is to indeavour to Alter the Fiery motions, which is to Oppoſe them with the Motions of Water, and therefore the Patient ſhould drink much of Thin Ptiſan which is onely a little French Barley, put to a great quantity of Spring-water, and to take off the Rawneſs

neſs with ſome Boiling, alſo to Let blood, and then to give Vomits to Throw out the Humors, and Gliſters to draw out the Humors, like as a Houſe that is ſet on Fire, there is Water thrown on the Fire, and all the Unuſeful Combuſtible ſtuff is taken out of the Houſe; the like muſt be done to a Man's body in a Feaver. As for Intermitting Feavers, they are when the Fire is Suppreſt by the Inward Natural moiſture of the Body, but being not Strong enough to Quench out the Unnatural Heat or Fire, made by Irregular motions, it onely Suppreſſes it, but the Fire being Stronger, Dilatates out again, and thus a Repetition may be made ſo long as either the Moiſture or Fire hath got the Victory or Power.

CHAP. XXIV.

Of the Feavers in the Blood.

A Feaver in the Blood is Occaſioned or Produced from Different cauſes, as having too much Choler in the Blood, or the Blood being too much Agitated through the over-much Rarity or Acuteneſs, or being Corrupted, or by an Unnatural or Supernatural heat drawn out from the Subſtantial parts of the Body, or from the Looſe humors, ſet on a Supernatural Fiery heat; but this is to be obſerved, that when as the Fire in the Blood is Quenched in the Blood, or the Hot Diſtempered motions in the Blood are Changed

Changed or Altered, the Blood is the ſame, like as Brandy-wine ſet on a Flame, the Flame being out, the Brandy-wine continues Brandy-wine, or like as Water that is Boiling on the Fire, take away the Fire, and the Water is as before the Boiling, only the Brandy-wine will be ſomewhat Weaker, and the Water leſs in Quantity, by reaſon of Evaporating; But 'tis to be obſerved, that there may be a Feaver in the Blood, and not in the Body, and a Feaver in the Body, and not in the Blood, the like for other Diſeaſes, as Diſeaſes of Corruptions and Oſtruction; as for the Diſtemper of the Body, that hath not been in the Blood, I have ſeen the Experience; for one of my Servants being very Sick of a Feaver, I gave Order he ſhould be Let blood, and when he was Let blood, it was brought to me to ſee how Good and Well-tempered Blood it was, I ſaid to thoſe of my Servants that brought the Blood, that the next time the Sick Perſon was Let blood, that Blood would appear as Ill-diſtempered Blood, as that preſent Blood was Good and Well-tempered, and then after a day or two, that the Veins had drawn out ſome of the Supernatural heat, or ſome of the Diſtempered matter, from the Several parts and Several humors of the Body into themſelves, the Sick Perſon being Let blood again, his Blood ſeem'd only to be as a Dark yellow Water, with a Thick Skin upon that Rare part, and the Third time he was Let blood, although it ſeem'd much Diſtempered, yet it ſeem'd more like Blood, as being

being of a more Red Colour, but yet the Blood ſeem'd as a Burnt Blood, but afterward he Recovered; for when the Veins had drawn out the Heat and Corruptions out of the Inward parts of the Body, and the ſeveral Inciſions had drawn out the Heat and Corruption, the Sick Man became Well, applying Cooling drinks to help to Quench out the Inward heat; but when as the Heat and Corruption is only in the Blood, the firſt time of Opening a Vein, the firſt Blood that Iſſues out is the Worſt. But ſo long as the Springs and Fountains from whence the Veins draw out Nouriſhment, which Springs and Fountains are the Stomack, Meſaraicks, Liver, Heart, and ſuch like Chief or Vital parts be Sound and Undecayed, the Veins cannot want Nouriſhment, if the Pipes, which are the Veins, be alſo Strong and Perfect, but if the Springs and Fountains be Decayed, the Veins can have no Supply, and the whole Fabrick of the Body muſt of neceſſity Diſſolve.

CHAP. XXV.

Of Agues.

AGues have different Diſtempers, as Cold, Shaking, Hot, Burning and Sweating Diſtempers, and one Diſtemper turning or changing into the other; but the Ague, and every Diſtemper in the Ague, doth not alwayes keep Equal times, for ſome Agues are Every day, ſome Every

every Other day, ſome every Third day, and ſome every Fourth day, which are named Quotidians, Tertians, Double Tertians, and Quartans; alſo the Several Diſtempers in the Ague do not keep Equal times, for ſometimes the Cold and Shaking Diſtemper continues Longer, and ſometimes ends Sooner, and ſometimes the Hot Burning Diſtemper continues Longer, and ſometimes ends Sooner, and ſometimes the Sweating Diſtemper doth the like; alſo ſometimes the Cold and Shaking Diſtemper is more Violent, and ſometimes leſs Violent than other, and ſometimes the Hot Burning Diſtemper is more Violent, and ſometimes leſs Violent, and ſometimes the Sweating Diſtemper is more Violent, and ſometimes leſs than others. But thoſe ſeveral Diſtempers reſemble the Alterations of the Looſe parts of the Elements, which proves that thoſe Diſtempers in the Diſeaſe named Ague, are only the Diſtempers of the Looſe humors in the Body, as Flegm, Choler, Melancholy and Blood, which are the Voluble parts of the Body, and not the Firm Subſtantial parts of the Body; But certainly, this Diſeaſe is cauſed by Ill Digeſtions, and Half-concocted humors, from which Dilates a Groſs Vapour, which Over-powers the Natural Heat, and Colour or Complexion of the Body; like as when Groſs Vapours ariſe from the Earth, Gather into Clouds, or Congeal into Snow, they do not only Darken the Sun's Light, but alſo Cool the Heat in the Sun's Rayes, untill ſuch time as

the Strength of the Sun doth Diſſipate thoſe Groſs Vapors and Clouds; and as the Day appears Darker, being Clouded, ſo will the Body, as the Complexion, appear Swarthy or Pale; and like as the Sun, when it is in Strife with thoſe Vapors or Clouds, there is a Tempeſt in the Region, ſo when as the Natural heat in the Body is in Strife with the Vapors and Clouds proceeding from Undigeſted humors, there ſeems to be a Storm and Tempeſt in the Body. But I obſerve, that the ſeveral Diſtempers in the Diſeaſe of an Ague, are like as the ſeveral Seaſons of the Year; as for Example, the Winter is Cold, the Spring Windy, the Summer Fiery hot, the Autumn Rainy or Wet; the like of the ſeveral Diſtempers in the Diſeaſe nam'd Ague; the firſt Diſtemper is to be as Cold and Dry, as Froſt, Snow or Ice: the ſecond Diſtemper is to Shake, where as every Part of the Body ſeems to be as much Agitated or Reſtleſs as Leaves on the Trees in a Wind; the third Diſtemper is to be ſo Hot and Dry, as if the Natural heat were in the Torrid Zone; the fourth and laſt Diſtemper is the Sweating Diſtemper, where every Pore of the Body ſeems to be ſet Wide Open to let out the Watery part to Drown the Body in a Deluge. But to conclude this Chapter, it is to be obſerved, that the Motions in the firſt Diſtemper are all Contracting motions; the Motions in the ſecond Diſtemper are all Expulſive; the Motions in the third Diſtemper are all Digeſtive; the Motions

tions in the fourth Diſtemper are all Dilative. But pray miſtake me not, for I mean Cold Contractions, Cold Expulſions, Hot Digeſtions, and Hot Dilatations; but according to thoſe Diſtempers and their Motions, there muſt be applied Contrary Medicines; alſo this is to be obſerved, that the Degrees of Time in or of the Repetition of this Diſeaſe is according to the Agitation of thoſe Half or Undigeſted humors, which is not always Conſtant to One Time, but whenſoever the Diſtemper is Paſt, the Body is Serene and Clear; as for the Remedy, it is to Cleanſe the Body with Vomits, Gliſters, and Letting blood, and then to apply Digeſtive Subſtances.

CHAP. XXVI.

Of Conſumptions.

ALL Conſumptions are cauſed by Unnatural Expulſion, cauſed by Miſtempered matter, or Miſtempered matter cauſed by Unnatural motions, ſuch as Work not to the Subſiſtence or Health of the Body, which after they have Corrupted the Matter, they turn to Expulſions, Throwing all out of the Body; but if they be only Exterior Expulſions, they only Untile the Houſe, that is, they do Unfleſh the Body; but if they be Interior Expulſions, they do not only Unfleſh the Body, but Rot ſome Part in the Body; and if the Unnatural Expulſions be amongſt the Vital parts, which are the

Foundations of the Life of the Body, the whole Fabrick of the Body Falls without redemption, and the Materials go to the Building of other Figures. But if they are Hot Expulsions, caused from a Thin, Sharp, Salt humor, there must be applied Cold Contracting medicines; and if they be Cold Expulsions, there must be applied Hot Contracting medicines. All Cold Expulsions are, when the Parts are Tender, Weak and Raw, and Undigested; and Hot Expulsions are, when the Parts are Burnt or Ulcerated; for all Hot Expulsions work upon the Parts of the Body, as Fire on Wood, when they are Burning Expulsions, or else like as Fire doth on Metall, Melting it into a Liquid Substance; and Cold Expulsions work upon the Parts, as when Clouds Beat down into Showers of Rain, or Flakes of Snow, Breaking or Extenuating those Clouds into Small parts; so that the Dropsical humors that arise from Hot Consumptions, are only Liquid like Melted Metall; and the Dropsical humor that arises from Cold Consumptions, is as a Watery Flood. But, as I said, in all Consumptions the Remedy must be Contractive, or at least Retentive, because the Nature of all Consumptions is Expulsive; but yet all, or the most part of Physicians, finding their Patients to be Lean or Dry, give all Dilative medicines, as if the Parts were only Gathered into a Less compass; but the truth is, when so much of the Natural bulk of the Body is Lessened, so much of the Body is Wasted: I will not

say,

ſay, but theſe Unnatural Expulſions might proceed from Unnatural Contractions, like as when any thing is made ſo Dry, as it Moulders into Duſt, but when it comes to that Degree, it Waſtes; So whenſoever the Body is in a Conſumption, the Motions therein are Expulſive: I do not mean by Siege or Vomit, although they will Spit much, which is a Kind of Vomiting, but they Waſte by Inſenſible Expirations. But all Purging medicines are Enemies to this Diſeaſe, unleſs they be very Gentle; for though Purging medicines do not Expulſe after the Nature of Conſumptive Expulſions, yet if they be Strong, they may in ſome kind Aſſiſt the Conſumptive Expulſions; neither is much Letting blood Good in thoſe Diſeaſes, yet a Little Refreſhes, and Tempers the Body; for in theſe Diſeaſes, Phyſicians muſt do as Chirurgions when they Cure Wounds, they firſt Cleanſe the Sore or Wound, taking away the Putrified matter gently with a Probe, and then lay a Healing Plaiſter, ſo Phyſicians muſt gently Purge and Bleed the Patient, and then give him Strengthening and Nouriſhing remedies. Again, many Phyſicians have a Rule, that when they perceive their Patients to be Exteriouſly Dry, they think them Hot; but it doth not follow, that all Drought proceeds from Heat, for there are Cold Droughts as well as Hot, ſo that a Phyſician muſt warily obſerve the Patients Drought whether it proceed from Cold or Heat, or whether the Drought proceed from

Want

Want of a ſufficient Quantity of Matter for the Body to Feed upon, or that the Matter, which properly ſhould be Porous and Spungy, is Contracted into an Unnatural Solidity; and though the Interior nature of Drought is made by Contraction, yet the Exterior motions may be Expulſive; as for Example, if any thing be Dried to that Degree, as to Fall into Duſt, although the Interior be Contracting, that cauſed it to be ſo Dry, yet the Exterior motions are Expulſive, that cauſeth it to Fall into Parts; but the Drought of Conſumptions doth proceed moſt commonly from a Scarcity of Nouriſhing matter, that ſhould Feed each Part of the Body, for the Principal and Conſiſtent parts being Diſtempered, cannot Digeſt ſo much, as will Feed the Hungry members thereof; but as I have ſaid before, all Conſumptions are wrought by Expulſive motions, for what is Contracted, is not Conſumed, nor doth Conſume, untill it Expulſes; but thoſe Bodies that are Lean or Dry by Contractions, are not ſo always in Conſumptions, for nothing is Waſted, only the Dimenſions, and Extenſions of the Body are drawn into a Leſs compaſs. Thus, as I have ſaid, Phyſicians, although they miſtake not the Diſeaſes, yet they may eaſily miſtake the Manner of the Diſeaſes, for one and the ſame Kind of Diſeaſes may Move after divers Manners in Several bodies, and in one and the Same Body.

CHAP.

CHAP. XXVII.

Of Coughs.

THere are many Several ſorts of Coughs, proceeding from Several cauſes; as ſome Coughs proceed from a Superfluity of Moiſture, others from an Unnatural Heat; others from a Corruption of Humors, others from a Decay of the Vital parts, others from Sudden Colds upon Hot diſtempers; Some are cauſed by an Interior Wind, ſome Coughs proceed from Salt humors, Bitter, Sharp and Sweet, ſome Coughs proceed from Flegm, which Flegm ariſeth like a Scum in a Pot, where as Meat is Boiling on a Fire, for when as the Stomach is Diſtemperedly Hot, the Humors in the Stomach boyl as Liquid Subſtances on the Fire; thoſe Boiling motions bearing up the Groſs humors beyond the Mouth of the Stomach, cauſing a Diſpute between the Breath and Humors, produce the Effect of Straining or Reaching upwards towards the Mouth, much like the Nature and Motions of Vomiting; but by reaſon thoſe Motions are not ſo Strong in Coughing as in Vomiting, the Coughing motions bring up only Pieces or Parts of Superfluous Flegm, or Groſs Spittle; the like for Corrupt humors; other Coughs proceed from Unnatural or Diſtempered Heats, which Heats cauſe Unneceſſary Vapors, which Vapors aſcending up from the Bowels or Stomach

mach to the Head, finding a Depreſſion, Convert or Change into a Watery Subſtance, which Watery Subſtance falls Back or Down, like Mizling or Small Rain, or in bigger Drops through the Paſſage of the Throat and Wind-pipe, which Paſſages being Oppreſt, and the Breath Hindered, cauſes a Strife; which Striving is a Straining, like as when Crumbs of Bread or Drops of Drink go not rightly through the Throat, but Trouble and Obſtruct the Wind-pipe, or when any ſuch Matter ſticks in the Paſſage of the Throat: for when any Part of the Body is Obſtructed, it indeavours to Releaſe it Self from thoſe Obſtructions; alſo when that the Vapor that ariſes, ariſes in very Thin and Rarified vapor, that Rarified vapor Thickens or Condenſes not ſo Suddenly, being farther from the degree of Water, but when Condenſed into Water, it falls down by Drops, which drops Trickling down the Throat, like as Tears from the Eyes trickle down the Cheeks of the Face, the Cough is not ſo Violent, but more Frequent; but if the Rheume be Salt or Sharp, that Trickles down the Throat, it cauſes a Gentle or Soft ſmart, which is much like the Touch of Tickling or Itching, which provokes a faint or weak Strain or Cough; Alſo Wind will provoke to Strain or Cough, the Motion of Wind is like as Hair ſhould Tickle the Noſe, or Wind will cauſe a Tickling in the Noſe, which cauſes the Effect of Sneezing, for Sneezing is nothing, but a Cough through the Noſe,

I may ſay it is a Noſe Cough, and Hickops are but Stomachs Coughs, Wind cauſing the Stomach to Strain; alſo the Guts have Coughs, which are cauſed by the Wind, which makes a Strife in the Guts and Bowels; other Coughs are produced from Decayed parts; for when as any Part is Corrupted, it becomes leſs Solid than Naturally it ſhould be; as for Example, the Fleſh of the Body, when Corrupted, becomes from Denſe Fleſh to a Slimy Subſtance, thence into a Watery Subſtance, which Falls into Parts, or it Changes from Fleſh into a Mixt Corrupted matter, which Falls into Parts; the ſeveral Mixtures or Diſtempered Subſtances, and Irregular motions make Diviſion of Parts, but in the time of Diſſolving, and Diviſions of any Part, there is a Strife, which cauſes Pain, and if the Strife be in the Lungs, it cauſeth a Coughs by Obſtructing the Breath; but ſome Cough proceed from Vapors and Winds, ariſing from the Decayed Interior parts, ſending up Vapors from the Diſſolving Subſtance, which cauſeth Coughs, and ſome Coughs cauſe Decays of the Prime Interior parts: for when as there falls from the Head a Conſtant Diſtillation, this Diſtillation doth like as Dropping Water, which will Penetrate or Divide Stone; more eaſily will Dropping or Drilling water, as Rheum, Corrupt Spongy matter as Fleſh is; but according as the Rheum is Freſh, Salt or Sharp, the Parts are a Longer or Shorter time a Decaying, for Salt and Sharp is Corroding, and by the

Corroding motions Ulcerates those Parts those Salt Rheums fall on, which Corrupts, and so Destroys them Soon. But the best Remedies for Coughs and Rheumatick Distillations, are Issues and Letting blood, also to Drink water sweetned with Fine Sugar, for the Water Cools the Distempered parts, and the Sugar Thickens the Rheum; also Water Quenches out the Heat of the Salt or Sharp motions, or Matter mixt in the Rheum, or that which is in the Stomach, Veins, or other Parts; but it must be taken when as the Stomach is most Empty, as in the Morning, and when they are going to Sleep, otherwise when as the Stomach is Full, the Water mixes with the Meat only, but doth not Dilatate or Spread it Self into the Several parts and Places, as it would do, if the Stomach were Empty; also when as Rheums proceed from Decayed parts, they must shun Violent exercises; also those that are troubled with Coughs and Rheums, must forbear all Salt or Sharp meats, also all Meat of Uneasie Digestion, by reason Ill Digestion causes Distempers and Unnatural heats. As for Chin-cough, 'tis a Wind or Vapor arising from the Lungs through the Wind-pipe, and as long as the Wind or Vapor ascends, the Patient cannot Draw in Reviving Air or Breath, but Coughs Violently and Incessantly, untill it Faint away, or have no Strength left, and with Straining will be as if it were Choaked or Strangled, and become Black in the Face, and after the Cough is past, it Recovers

vers again; and some have many Fits or Repetitions of such Coughing, and some Die with so Coughing. As for the Remedy I leave to Physicians, but surely Lozanges made to Expel Wind, and to Dissolve in the Patients Mouth to Infuse by Degrees, or to Mix with the Air, or Reviving Breath, by that means may Descend with the Breath into the Lungs, by which the Patient may be Cured.

CHAP. XXVIII.

Of Dropsies.

MOst Dropsies are something of the Nature of Consumptions, as being in the way to Consumptive Expulsions, for they Dilatate after that manner, as the other Expulses, especially if they be Dropsies which proceed from Corrupt parts, and then they turn to Consumptive Expulsions, and the onely Difference in most Dropsies and Consumptions is, that in Dropsies, as long as that Disease lasts, the Motions in the Body are most Dilatating, which is in a Degree to Expulsion, and when it comes to a Consumption, they are all Expulsions; but as the Motions differ, so the Diseases differ, for there are several sorts of Dilatations, and several sorts of Expulsions, nay, some are Different in the Manner of Working, as if they were of other Kinds of Motions; but some Dropsies proceed from Hot dilatations, other

from Cold dilatations, and ſome proceed from Too many Digeſtive motions, that is, when there are too Many or too Strong Diſgeſtive motions in the Body for the Natural temper of the Body, Digeſting ſo Faſt, as to make more Nouriſhment than the Several parts can receive with Temperance, which makes the Veins and the reſt of the Sucking parts Glutenous; or elſe thoſe many Digeſting motions work too Curiouſly, for by reaſon they cannot be Idle, they work the Nouriſhing matter too Fine, or too Thin, for Proper uſes; as if Flower ſhould be ſo often Boulted, that it could not work into a Lump, or be Baked for Bread; or like as any thing ſhould be Wrought upon ſo much as to become Liquid, as into Oil or Water. Other Dropſies proceed from the Weakneſs of Diſgeſtion, thoſe Motions being not Strong or Sufficient to Work all that is brought into the Stomach; whereupon that Superfluous matter Corrupts with Diſtempered motions, and when it comes to be Corrupted, it either Dilatates or Expulſes; if it onely Dilatates, it turns to Water, if it be Expulſive it Caſts forth, either by Vomit or Stool, or elſe lies to Corrupt the Principal parts in the Body, which when they are joyned together, Expel Life by their Treacherous Uſurpation. Other Dropſies are cauſed by too Weak Contracting motions, cauſing that to be Tender that ſhould be Solid, or thoſe Parts Looſe that ſhould be Firm, as not Contracting Hard enough; for though Meat Dilates

lates into Chylus, Chylus into a Thinner ſubſtance, and ſo into Blood, yet by the Nouriſhing Propriety from Dilating Blood it Contracts into Fleſh, and to the Strengthening of all the Parts of the Body, but for want of that Strengthning Contraction, all the Parts of the Body grow Weaker, as to abate of ſuch or ſuch a Kind of Strengthening motion. But, as I ſaid before, that Animate matter in ſuch Diſeaſed bodies turns from Natural Contracting to Unnatural Dilatating, turning by Degrees from one to another, and then the Dilatations work more and more, Extending more and more in ſuch Circular motions as produce Water, for when the Contracted parts come to ſuch a Degree of Extenſion, they become from being Solid to be Spongie, from being Spongie to be Soft, from Soft to be Liquid, from Liquid Fluid, and when it comes to ſuch a Degree of a Fluid Extenſion, it turns Wet, and when it is Soft, Liquid, Fluid, and VVet, it is turned to that we call VVater; for Oil, though it be Soft, Liquid, and Fluid, yet it is not abſolute VVet, it is rather Moiſt than VVet, or Glibby and Wet, or Glibby and Moiſt, ſo that Oil is a Glibby and Moiſt body, rather than a Soaking Wet body; but when this Unnatural Watery Extenuation in the Body Extenuates beyond the Degree of Water, it turns to Vapor, which cauſes the Diſeaſed to be Puft, or Blown like a Bladder, rather than Swell'd out, as we ſhall perceive, that a little time before the Patient's

fall

fall into a Conſumption, they will be ſo Puft out, as their Fleſh will be like a Fuz-ball, the next Degree they fall into a Fiery Extenuation, for when the Humor Extenuates beyond Vapor, which is a Kind of an Air, then it becomes Hot like Fire, which is a Hectick feaver, and when the Humor hath Extenuated to the Farthest Degree, it Expulſes, and ſo Pulls down and Throws out the Life of the Diſeaſed; but in the Hydropical diſeaſes, there muſt firſt be Applied Attractive medicines, to Draw out the Watery overflows, by Iſſues, Cupping-glaſſes, or the like; then there muſt be Applied Expulſive medicines, as Purgings, and Bleedings, and Sweatings, yet they muſt be gently Applied, for fear of Weakning the Body, by Drawing out the Humor too Suddenly: then there muſt be Applied Contracting medicines, to Draw into an United ſubſtance, as to Gather or Draw up thoſe Parts that have been made Looſe, Porous, and Spongy with the Diſeaſe; then there muſt be Applied Retentive medicines, to Confirm and Settle them, after their Natural Manner or Form; then laſt there muſt be Applied Digeſtive medicines, to Reſtore what is Waſted; but if any of the Principal parts be Impair'd, Waſted, or Expulſed, they neither can be Reſtored nor Mended, but by a New Creation, which Uncreating Brains perhaps conceive not. But I muſt intreat my Readers to obſerve, that ſome ſorts of Motions Begin a Diſeaſe, that is, they lay the Foundations thereof, and other ſorts of

Motions

Motions Work upon thoſe Foundations. But this is to be obſerved, that ſometimes Dropſies proceed from ſome of the Interior parts, that are Drier or Harder than Naturally they ſhould be, which Hinders the Natural Digeſting motions, and then inſtead of Natural Digeſting motions, there proceed Unnatural Dilatating motions, and after Unnatural Expulſions; but ſo we may perceive, that from Unnatural Contractions proceed Unnatural Dilatations, and ſo Unnatural Expulſions.

CHAP. XXIX.

Of Sweating Diſeaſes.

ALL Sweating Diſeaſes are cauſed by ſuch Kind of Extenuating motions, as Melt Metall, and not by ſuch Kind of Extenuating motions, as Evaporate Water, for the Evaporation of the Watery parts of the Body breath forth in Inſenſible Tranſpirations, as Breathing through the Pores like Thin Air, but Sweat runs through the Pores like Liquid Oar through Gutters of Earth; but Sweats are Good or Bad for the Body, according to the Matter or Humors that are Melted out; as for Example, I will compare the Humors of the Body to ſeveral Metalls, as Iron, Lead, Tin, Copper, Silver and Gold; Iron is Melancholy Aduſt; Lead is Cold and Dry, or Cold and Moiſt Melancholy; Tin is Flegm; Copper is Choler;

Silver

Silver is the Radical Humor; and Gold is the Vital Spirits; These Humors must be Proportionably Tempered, to make a Healthfull Body; there must not be Too much Quantity of Lead, Tin or Copper, for the Silver or Gold, but unless there be Some, they will not Work; like as Coyn, it cannot be Wrought or Formed without some Allay, and if the Allay be Too much, it Abases the Coyn. Likewise there must be so much Heat in the Body, only as to Compound those Humors, not to Melt them out by Sweats, unless they Superabound; and then Physicians must only have a Care to Melt out that Humor, that Superabounds; for if the Radical Humor should be melted, or the Vital Spirits spent, it Destroys the Body by Wasting the Life. But in some cases Sweating is very Beneficial to the Body, as in Great Colds, which have Knit up the Pores or Passages of the Body, or in Great Surfeits, or in Malignant Diseases, which helps to Expell the Poysonous humor or Corrupted humors in the Body, or Melt the Icy humors Congeal'd by Cold; but after those Sweats that are Beneficial, and Wholesome for the Body. the Body will be much Stronger and Agiler, and the Spirits Quicker and Livelier; but by those Sweats that are Pernicious to the Body, the Body will be Faint and Weak: But in those Diseases a Physician must be very Carefull, when he puts a Patient into a Sweat, as to give such Medicines as will Work upon that Humor he would have Sweat forth; but in Sweating Diseases,

Diſeaſes, when the Body Sweats too Violently, (like as in Great and Dangerous Fluxes, which are not to be Stayed by Ordinary means) although in thoſe Diſeaſes, there muſt be uſed Contracting medicines, yet ſome Sweats require Hot Contracting medicines, others Cold Contracting medicines, and thoſe Medicines that are Applied, muſt be applied Gently, and by Degrees, leſt by a Sudden Contraction they ſhould Stop the Pores of the Body too much, which are the Doors to Let out the Smoak in the Body, as well as the Sweat of the Body, or by too Haſty Contractions thoſe Paſſages ſhould be Shut, that ſhould be kept Open, or thoſe kept Open, that ſhould be Shut; but Phyſicians will Gueſs by the Patient, what Humors they Sweat forth; for Cold Sweats are from Melancholy; Clammy Sweats from Thick Flegm; Hot Burning Sweats from Choler; Cold Faint Sweats proceed from the Radical Humor; Hot Faint Sweats from the Vital Spirits.

CHAP. XXX.

Of Gangrenes.

GAngrenes are of the Nature of the Plague, and as there are Degrees of Plagues, as ſome more Deadly than others, ſo of Gangrenes, and the Higheſt degree of Gangrenes is like the Spotted Plague, which makes a ſudden Deſtruction of Life; and as one Plaguy Body Infects

an other Body that comes near it, ſo Gangrenes; although Gangrenes will not Infect ſeveral Bodies, yet that Part of the Body that is Gangrened, will Infect the next Part to it. But it is to be obſerved, that Exceſſive Heat, and Exceſſive Cold, work alike Effects, ſo Exceſſive Exterior heat, and Interior heat is the cauſe of Plagues, Inflaming both the Air and Bodies of Men; ſo many times Gangrenes come through Exceſſive Exterior or Interior cold; as for Example, when as in very Cold Countries, ſome that are not Warmly Clad, their Limbs are Dead with Cold, and Limbs of others have been Separated from their Bodies with Cold; and certainly, thoſe Gangrenes that are Bred in the Body, and not cauſed by Extremity of the Cold Climates, are made or produced through the Want of Natural heat in that part of the Body that is Infected with this Diſeaſe. But I have heard that the beſt Cure for this Diſeaſe is, to Fire thoſe Parts that are ſo Affected, for the Firing hinders or ſtops the Gangrenes progreſs.

CHAP. XXXI.

Of Cancres and Fiſtulaes.

CAncres and Fiſtulaes are Produced much alike, as proceeding from an Aqua-fortis, or at leaſt a Vitriol Humor bred in the Body, that is, an Extraordinary Thin, Sharp or Salt humor, that Eats through the Fleſh, as Vitriol through Metalls;

Metalls; The onely Difference betwixt Cancres and Fiſtulaes is, that Cancres are the more Corroding and Subdividing Vitriol, than that of Fiſtulaes are; Alſo Cancres are rather like a Fix'd Salt or Vitriol, than a Volatile; for it keeps its Centre, although it Spreads; whereas that Humor of Fiſtulaes runs from Place to Place, Breaking out in ſeveral Paſſages and Parts of the Body: but the onely Remedies, if there be any, are Purging once a Month for ſome time, as alſo Iſſues, and Letting blood ſometimes, but eſpecially to keep a Strict Diet, as to Eat no manner of Salt, or any thing Sharp, nor to Eat Over-drie Roaſted meat, and to Drink Ptiſan drinks, ſuch as Apothecaries give Young Gallants. But if this do not Cure thoſe Parts ſo Affected, thoſe Parts muſt be Fired, as Chirurgeons know well how it ſhould be done. But to conclude, the Interior motions of thoſe Diſeaſes are Dilative, and the Exterior motions Expulſive.

CHAP. XXXII.

Of the Gout.

AS for that Diſeaſe that is named the Gout, there are Different ſorts, but the two Prime ſorts are the Hard Swell'd Gout, and the Running Gout; theſe two ſorts of Gout are of the Nature of Volatile or Fixt Salt or Sulphur, both being of a Hot and Fiery Nature; as for the

Fix'd Gout, it is Exteriously Inflamed, unless it be that which is called the Cold Gout, which are rather White Swellings, than that Disease named the Gout. But the Fix'd Gout, as I say, is Exteriously Inflamed, as also Interiously Hot; but the Causes of the Exterior Inflammation are Hot dilatations, and the Causes of the Interior Pultive pain, are Cross and Opposite motions, for the Hot Contracting and Retenting motions, and the Hot Dilatating motions make War with each other, as that the Contracting motions strive and endeavour to Gather in the Matter, and to Lessen the Swelling, and the Dilative motions strive and indeavour not onely to hinder the Contracting motions, but to Dilatate that Matter into a more Swell'd Bulk or Body, and the Retentive motions indeavour, that the Swelling shall continue Hard and Fiery; So that these Oppositions and Cross actions amongst Different motions, make great Perturbances, and Cross Opposite motions, both which cause great Pain. As for the Running Gout, that Removes from Joynt to Joynt, or Place to Place, 'tis of the Nature of Volatil Salt or Sulphur, but it is a Rare Salt humor, and more Rare than that of Cancres or Fistulaes, but not so Corroding as that Humor that produceth Cancres or Fistulaes; but this Humor of the Running Gout is like that of the Sciatica. As for the Disease of the Gout, I never heard, any was perfectly Cured of it, but certainly Fresh diet, Spare diet, and Cooling diet is best for

for the Fix'd Gout; and Cupping-glasses, many Issues in several places in the Body; as also a little Letting blood and Gentle Purging, is best for the Running Gout.

CHAP. XXXIII.

Of Hard White Swellings.

ALL Hard White Swellings, as Wens, and other Sorts of the like Nature, are Composed of a Clammy, Slimy or Tough, Cold humor, which hath been gathered by Cold Attracting motions, and setled by Cold Retentive motions in one Place of the Body, and is made Hard by Cold Interior Contracting motions; but the Exterior swelling is caused by Cold Interior Dilatating motions: But for the Cure, I cannot tell what will Dissolve those Swellings; some are Cut off from the Body as a Superfluous matter and part, but that Remedy is dangerous for fear of Gangrenes, or when those Swellings are too near the Veins, but some cannot be cut off for many several Reasons; for all White Hard swellings are not like Wens, some are like that which is named the King's Evil; but the best Remedy certainly is Triacle and Hony mixt together, and Spread upon Leather, and so bound on the Swelling, changing it once a Day, and to Eat every Morning a Piece of Bread and Butter with Triacle and Hony Spread upon the Bread, and to use Gentle Exercises

ciſes after. As for Triacle, it is of a Nature to Expel Cold humors; either out of the Body, or to Convert them into a Juſt and Natural Temper; alſo it being applied Outwardly, doth indeavour, through the Pores of the Skin and Fleſh, to put Heat into thoſe Swellings, and by the Heat to Rarifie and ſo Diſſipate thoſe Swellings, or to Break and Diſſolve them; but as for what is Eaten, it muſt be Moderate, otherwiſe it may put the Patient into a Feaver, for Triacle is Compounded of Hot Cordials or Medicines.

CHAP. XXXIV.

Of the Stone.

THat Diſeaſe, namely the Stone in the Kidneys and Bladders of Men, is certainly made by ſuch Kind of Motions and Temperaments of Matter, as Stones in the Earth, which is a Slimy, or Clammy, or Tough humor, that is Hardned by Heat, either Actual, or Virtual, or both. Wherefore all thoſe that fear the Stone, ſhould not uſe Violent Exerciſes, nor eat Fiery Meats, nor eat thoſe Meats that are apt to breed Flegm, or to drink any Strong Liquor, eſpecially Sharp Wines; for all Salt and Sharp Subſtances are apt to Corrode, and by that Corroding motion beget an Exceſſive Heat, that Bakes their Slimy humors into Stone; but when Stones are bred in thoſe forementioned Parts,

Parts, there are few Remedies to Dissolve them; some there are that give Ease to the Patient in the Passages or Avoidance of those Stones that fall into the Ureters, and some are Cured by Incisions, and Cutting, but that is when the Stones are taken out of the Ureters, but neither Physicians nor Surgeons can make Incisions into the Bladder or Kidnies without a Total ruine, as Death to the Whole body.

CHAP. XXXV.

Of Apoplexies.

SOme sorts of Apoplexies are caused by an Inbred Superfluous Water in the Brain, which being Congealed by a Cold Contraction, falling to the Knitting part of the Head, which is the Hinder part, it Stupefies the Senses, Stopping the Natural motions, as a Flowing River that is turned into Ice, but those sorts of Apoplexies are Curable, if Assistance be taken in time, which is by Hot Dilatating medicines, not only to Stretch out the Icy Contraction, but to Expell that Cold Watery humor by a Rarification; but if the Apoplexie be caused by an Imbred Slime, as Flegm, which is of a Thicker nature than Water, and is become Crusted or Petrified by Hot Contractions, it is seldome or never Cured, no more than Brick, which is once Baked by the Sun, or in a Fire, can be made to such Clay, as it was before it was Burnt; But, mistake me not, for

for I do not mean the Humor is as Hard as Stone, or Brick, in the Head, but Hard in proportion to the Nature of the Brain, that is, the Flegm is grown ſo Dry and Tough, as not to be Diſſolved ſo ſoon as the Nature of the Brain requires it; for though Flegm will be Contracted into Stone, as in the Bladder and Kidnies, yet not in the Brain, by reaſon the Nature of the Brain is ſo Tender, and ſo Senſible, as it cannot Indure ſo Solid a Subſtance therein, nor Suffer ſo Long a Time, as the Humor will be Petrifying, to Stop the Paſſages to the Brain, not but thoſe Kind of Motions that produce Stone, may be ſo Strong and ſo Swift, as to turn Matter into Stone immediately; but I do believe not in the Animal bodies, for they are too Weak Figures for ſo Strong Motions to work in; But, as I ſaid, theſe Hot or Cold Contractions, (for both Sorts of Contractions produce Stone) make Tough, Clammy, Cruſted, Hard Flegm, which is ſome degree toward Stone; Flegm if it ſtop the Paſſages to the Brain, cauſeth an Apoplexie; but the reaſon, why the Watery Contractions are more apt for Cure, is, becauſe the Nature of Water is Fluid, and is eaſily diſſolved by Dilatation, Extenuation being of its Interior nature; but Slime and Flegm are more Solid, and not ſo Flexible to be Wrought upon, as ſuddenly to Change Shape or Nature, in being Diſſolved or Transformed. The third cauſe is a Fulneſs of Blood, or a Thickneſs of Blood, for when the Veins are too Full, there is not Vacuity enough for

for the Blood to Run in, ſo the Motion thereof is Stopp'd; or if the Blood is too Thick, or Clammy, it becomes leſs Fluid, and the more Solid it is, the Slower the Motion is; and as the Blood may have too Quick a Motion, by reaſon of Heat, ſo it may have too Slow a Motion, by reaſon of Thickneſs; and if the Veins are fill'd too Full of Hot blood, wherein are many Spirits, it indangers the Breaking ſome of the Veins, like as when Strong Liquor is put into a Barrel, if it be filled too Full, the Strength of the Spirits ſtriving for Liberty, Break the Barrel, the like will the Blood in the Veins, and if a Vein chance to Break in the Head, it Overflows the Brain, and Drowns the Life therein. The laſt is Groſs Vapor, which may aſcend from the Bowels or Stomach, which cauſeth ſo great a Smoak, as it Suffocates or Choaks the Brain, Smothering out the Life of the Body. All Apoplexies are ſomewhat of the Nature of Dead Palſies: But the beſt Remedy for them is Letting blood, and to make Iſſues in the Leggs, as alſo Purging the Stomach and Bowels; as for the Stomach, it muſt be Purged by ſuch Druggs as Purge Groſs and Clammy or Tough humors, but the Bowels muſt be Purged by Gliſters; alſo Gargling the Throat, and Sneezing will do Good.

CHAP. XXXVI.

Of Epilepsie, which is called Falling-Sickness.

THis Disease is caused by a Water in the Brain, which Water is most commonly Green, like Sea-water, and hath an Ebbing and Flowing motion, like the Tides thereof, and when the Water is at Full tide on the Fore-part of the Head, it takes the Diseased after the manner of Panting, and short Breathing, causing them to Beat themselves, and Foam at the Mouth, neither can they Hear, See, Smell nor Speak; the reason is, that the Flowing motion driving the Watery humor so far out, as it Extends the *Pia mater* and *Dura mater* of the Brain, farther than the Natural Extension, which Extension swelling out towards the Outward part of the Head, Hinders all Recourse, Stopping those Passages which should receive the Objects through the Exterior Senses, and the Froth or Slimy humor, which is betwixt the Skin where the Brain lies, and the Skul, being Pressed out, falls through the Throat into the Mouth, and there works forth like Barm, which is called Foaming; but though the Motions of the Head are thus Altered for a time, so as there is neither Sense nor Rational knowledge, yet the Body may be after the Natural course, and not any ways Altered; but the Body feeling

feeling Life oppreſt in the Head, the ſeveral Parts or Members in the Body Strive and Struggle, with what Power and Strength they have, to Releaſe it; like as a Loyal people, that would Defend or Releaſe their Natural and True-born King from being Priſoner to a Forein Enemy; but when this Water Flows to the Hinder part of the Head, the *Pia Mater* and *Dura Mater* Extending out that way, Stops all the Nerves over the Nape of the Neck, by which Stopping, it Stops the Exterior motions of the Whole Body, by reaſon that Place is the Knitting-place of thoſe Moving Strings, and when the Water is Flowed, as I ſaid, to this Part, the Diſeaſed lies as in a Swoon, as if he were quite Dead, having no Viſible Motion, but as ſoon as the Water begins to Fall back, they begin to Recover out of the Fits; but as often as the Water in the Head is at Full tide, either of the Fore-part of the Head, or the Hinder-part, the Diſeaſed falls into a Fit, which is ſometimes Frequent, ſometimes not, for it keeps no Conſtant Courſe, Time nor Meaſure, and according as the *Pia Mater* and *Dura Mater* Extends, the Fits are Stronger or Weaker. Likewiſe ſuch Green water, with ſuch Motions about the Heart, may produce the ſame Diſeaſe, for oft-times this Green water, or Green Thin humor Aſcends, or Runs from ſeveral Parts of the Body into the Ciſterns of the Head and the Heart; and this Kind of Water or Humor if it be in the Nerves, cauſes dange-

rous Convulsions, by reason of the Sharpness that Shrivels up the Nerves; and when it is in the Blood, it causes the Veins to Contract, through the same reason; if in the Stomach, it causes Vomiting, or great Fluxes, by Subdividing the Humors, and the Sharpness Prickling or Tickling the Stomach, provokes a Straining, as Tickling in the Nose doth Sneezing; So the Stomach, either Strains Upwards or Downwards. The best Cure for this Disease is, to make Issues on the Inside of the Thighes or Legs of the Patient.

CHAP. XXXVII.

Of Lethargies.

LEthargy proceeds either from Want of Natural heat, or that the Brain is too Full of Gross humors, or too Full of Watery humors. If it proceed from Want of Natural Heat, Nourishing Food is the best Remedy, but if it be caused by Gross humors, or an Overflow of Watery humors, the best is, to Purge the Patients Head by Syringing through the Nostrils, as also by Syringing the Throat, and to Apply to him Glisters to Draw the Humors from the Head. Also Issues in the Neck are good. The Motions that cause Lethargy are Attractions and Contractions, Drawing up Humors and Vapors from the several Parts of the Body into the Head.

CHAP.

CHAP. XXXVIII.

Of Shaking Palsies.

SHaking Palsies proceed from a Supernatural Extenuation in the Nerves, which by the Extenuating become more Porous and Hollow, and become like a Perpetual Earthquake, having Flatuous or Windy humor in the Bowels thereof, and cannot find Passage out; If it proceeds from a Hot extension, there must be applied Cold Condensing medicines; If it be a Cold extension, there must be applied Hot Condensing Remedies.

CHAP. XXXIX.

Of Convulsions and Cramps.

COnvulsions proceed from Contracting motions, quite contrary to the Natural motions of the Body, as Winding up the Sinews, Nerves or Veins; but especially those Sinews which Joyn and Couple the Muscles together, Drawing not onely Contrary, but Contracting Several ways, and after Divers manners; for sometimes the Nerves are, as if we should tie Strings in Bow-knots, others, as if we should Wind up Lute-strings or Pegs; and some are Twisted like Whip-cord, and many the like ways, which would be too long to Recount; but

but these Contractions proceed either from a Wind got into the Nerves or Veins, which troubles them, as the Wind-cholick doth the Guts, or a Sharp humor that Shrivels them together, or a Salt Watery humor, Mixt with Wind, which Strugling and Striving together, Turns, Winds, Folds or Rolls up the Nerves, like the Waves of the Sea, or a Cold Icy humor, which Draws and Gathers in the Nerves, as Frost will do all Spongy bodies, or some Thick Clammy humor, which Stops some Passages, which causeth the Natural motions to turn Irregular; but if the Humor be onely in the Veins, it is Cured by Letting blood; if the Blood be Corrupted, Sharp, or Salt, or if the Blood be Cold, Windy or Watry, Hot Liquid medicines Cure it, or Cordial water, or the like; and if it be a Cold humor in the Nerves, Hot Oils and Extraordinary Hot medicines Cure it, or the Spirit of Castor, Oil of Amber, and the like; but if it proceed from a Salt, Sharp, Watery humor, or a Thick Clammy humor in the Nerves, it is seldom or never Cured, because it is not easily got out, neither can Medicines so suddenly get into the Nerves, as into the Veins; for though the Cold in the Nerves may be easily Cured, by Melting and Dissolving by the Comfortable Warmth, or Violent Heats from the Hot Cordial medicines, which Spread about the Body, as a Great Fire in a Chimney, which Spreads about and Heats all the Room, if the Fire in the Chimney be answerable to the Bigness

neſs or Largeneſs of the Room it is in, and the Leſſer the Room is, and the Bigger the Fire is, the Hotter it is; Wherefore it is to be conſidered, that thoſe, that are at Full Growth, or are Larger of Body, if thus Diſeaſed, ought to have a Greater proportion, or a Larger quantity of thoſe Medicines, than a Child, or thoſe that are but Little of Stature; for though thoſe that are of a Little Stature, may be more Strong than thoſe that are of a far Bigger bulk, yet in the cauſe of Diffuſing or Dilatating medicines, the Circumference of the Body muſt be conſidered as well as the Strength of the Medicines; and if the Convulſion be in the Stomach, cauſed by the afore-ſaid Humor, Purging Medicines or Cordials may Cure it, unleſs the Stomach is Gathered, Shrivell'd, or Shrunk up by an Unnatural Contracting heat, like as Leather that is put into the Fire, which when ſo, the Stomach can no more be Cured, than Leather be made Smooth, which is Shrunk up in a Purſe by Fire; after the like manner as Convulſions, are Cramps, but Cramps moſt commonly are only Contractions of the Small Veins, which Tie or Twiſt them up, and many times ſo Hard, as they Break; for thoſe, that have been much troubled with the Cramp, will have all the Skin, where the Cramp hath Taken them, Streaked with broken Veins, I mean the ſmall Hair-veins; but Rubbing the part Grieved, with a Warm cloath, will Untie and Untwiſt them again, by Diſſolving the Cold, or Diſperſing the Wind,

Wind, or Rarifying the Blood therein, this we find by Experience; Wherefore I ſhould think, that in Convulſion fits, that are cauſed by the like, that if the Diſeaſed ſhould be Rubbed with Hot cloaths Outwardly applied, as well as Hot medicines Inwardly taken, it might do the Patient much good. But I muſt Remember my Readers, that in Convulſions, the Strength of the Medicines Inwardly taken, muſt be according to the Strength of the Fits; for if they be Strong fits, Weak medicines do no Good, for more Strength goes to Untie a Hard knot, than a Looſe knot, or to Untwiſt a Hard ſtring, than a Looſe ſtring; beſides, it is hard to Know after what manner the Knot is Tied or Twiſted, and many indeed are ſo Ignorant of Medicines, or the manner of the Diſeaſe, as to Apply ſuch as ſhall Hap of the Right end, as thoſe which are Cured, are cured by Chance, and Chance hits ſo ſeldome right, as not One of an Hundred eſcapes of theſe Kind of Diſeaſes, if the Diſeaſe is any ways Violent, for then the Motions tie ſo Faſt and ſo Strong, as they break the Life of that Figure aſunder. There be Natural Contractions, and Unnatural Contractions, that is, Proper or Improper to the Health of the Figure.

CHAP.

CHAP. XL.

Of Collicks.

ALL Collicks are towards the Nature of Convulsions, or at least Cramps. Some Collicks proceed from Raw Undigested humors, some from Sharp Melancholy humors, others from Cold Flegmatick humors, others from Hot Cholerick humors, others from Putrified humors; Some Collicks are in the Stomach, others are in the Bowels, as the Guts, some in the Sides, and sometimes in the Veins; but these Collicks are Cramps; but the causes of all Collicks are Extenuating motions, though the Effects are oft times Contracting, but if the cause be Contracting, it is a Cramp, not a Collick, for a Collick is properly Wind, produced from the afore-said Humors, that is, when those Humors Extenuate farther than a Watery Extenuation, which turns into Vapor or Wind, which Vaporous Wind, or VVindy Vapor, striving to get Vent, being Stopped by Grosser vapor, or Thicker humor, runs about in Cross motions, which cause Pain; for the Extenuating motions thrusting Outward, and the Resisting motions thrusting Backward, run Cross, or Beat on each other, which causeth Pain: and as long as the Strife lasts, the Body hath no Ease, untill some Assistance in Medicines be given, or that it can Over-master the Resistent motions;

but when once it hath Liberty, it Flies out in Expulsive motions, at all Vents; but if the Extenuating humors be Broken or Dissolved in the Body by the Well-tempered motion therein, or Expulsing of it Self, it Evaporates through the Pores of the Body in Insensible Transpirations; but if the Extenuating can find no way to be Expulsed, it Gathers Inward in small and smaller Rings, like a Scrue, drawing in the Guts or Stomach, Stopping the Passages thereof, whereby the Body can neither receive Nourishment, nor send out Excrement, with which the Body is brought to an utter Destruction; this Distemper is oft times produced from Sharp, Hot, Cholerick humors, which Sharpness hath a Natural Contracting quality, which is rather of the Nature of a Cramp, or a Convulsion, than the Nature of a Collick; howsoever, Expulsive medicines are good in these Cases. Convulsions are Collicks in the Nerves, and Cramps Collicks in the Veins; and as the Cholick in the Stomach or Guts proceeds sometimes from Wind, and sometimes from Crude, Bilous, Sharp humors, so doth this.

CHAP. XLI.

Of Surfeits.

SUrfeits are Superfluities; as too much Heat, or too much Cold, or when there is taken into the Body too great a Quantity of Meat, or Drink,

Drink, or the like. Likewiſe when the Nature of the Meat is Diſagreeing to the Nature of the Body, there one Scruple will be too much, and will give a Surfeit, for Surfeits do not onely Oppreſs by the Superfluous Quantity of Matter, but Diſturb by the Superfluous Motions, the Diſagreeing matter, cauſing more Motion than Naturally belongs to a Healthful body; beſides, like a Company of Rude and Unruly Strangers Diſturb and Hinder the Regular motions, altering the Natural Conſtitutions and Uniformity of the Body, and many times Ruine the Body, unleſs an Aſſiſtant motion in Medicinable matter is brought to help to Expel the Superfluous, or that the Natural Expulſive motions in the Body are Strong enough, to Throw out that Ill Matter, either by Vomit, or Stool, or other Evacuation; but many times the Superfluities become ſo Strong, not onely by their own Ill Nature, or Great Quantity, but by making a Faction, and ſo begetting a Party amongſt the Natural motions, which makes ſuch a General Diſorder, that though the Natural Digeſtive motions, and the Natural Expulſive motions joyn with the like Aſſiſtant motions taken in Medicines, yet the Body ſhall be Ruinated, and Life caſt out by that Matter and theſe Motions, that are their Enemies therein.

CHAP. XLII.

Of Natural Purging, and Unnatural Fluxes.

THere are many Several ſorts and many Several manners of Purging, for all the Superfluous matter, which is named Excrements, paſs forth of an Animal body, as Man, by Purging, as from the Mouth, Noſe, Eyes, Ears, Pores of the Fleſh, and from the Lower parts; but theſe Purgings are Natural, without which the Body could not Subſiſt; for if Motion did not carry forth the Superfluous Subſtance or Matter in the Body, there would be no Place nor Parts capable to receive Nouriſhing Matter or Subſtance; but as there be Natural Evacuations and Natural Nouriſhments, ſo there are Unnatural Evacuations and Unnatural Nouriſhments, as to Evacuate Violently or Irregularly, or to Evacuate that which ſhould Remain; alſo for Nouriſhment, as to Nouriſh ſome Parts More than other Parts, or to Nouriſh a Part More than it ſhould be Nouriſhed, or to Nouriſh Superfluities, or to Nouriſh ſome Diſeaſes made by Unnatural Conjunctions, or Propagations of Humors, or Temperaments and Motions; but for the Unnatural Evacuations, all Fluxes are Unnatural, let them be from any Part of the Body, yet I cannot ſay they are Unnatural, as that they are not Incident to the Body, but Unnatural as being an Irregularity in the Body, for

for all Violent Fluxes are Accidental to the Body, but not Ordinary. But all Violent and Unnatural Fluxes are Dangerous, especially some sorts of Unnatural Fluxes, as Spitting, Bleeding, for those Fluxes most commonly proceed from Decays of some or one of the Vital parts; but mistake me not, I mean not such Fluxes of Spitting and Bleeding, that are produced from Catching Cold or Superfluity of Humors, or such Bleeding as proceeds from Violent Motion, or Agitation, or a Superfluity of Blood, but such as proceeds from some Decay of Vital or some Bruised Parts, or Broken Veins, or Impostumes, or the like; also some sorts of Vomitings and Purgings by Siege are Dangerous, as such as proceed from an Unnatural, Interior, Fiery heat, whose Motions do so Divide and Subdivide the Humors, as causeth them to be so Rare and Agil, as not to stay in the Body, in which, Irregular motions disturb the Regular motions and Parts, which is many times the cause of the Bodies utter Dissolution.

CHAP. XLIII.

Several Causes of the Flux, of Purging or Vomiting.

UNnatural Vomiting and Purging is caused many ways; sometimes by reason the Body is too Full of Humors, and sometimes by reason

reason of Eating or Drinking more than the Stomach can hold, or Eating and Drinking that which Disagrees with the Humors in the Stomach, or that the Stomach is too Hot or too Weak; and sometimes by Unusual motions, or Violent motions caused from Violent passions or Imaginations, which have Disturbed the Sensitive motions of the Body; But those Purgings and Vomitings that are most Dangerous to the Consistence of the Body, are caused by Unnatural humor bred in the Body, which is of the Nature of Quicksilver, although the Colour of that Humor is Green or Black, and the Taste Bitter or Sharp; but these Humors when they are Strong either in Quantity or Effect, they cause Violent Evacuations, Dividing and Subdividing the Natural Consistent Humors, or otherwise they set the Stomach in an Unnatural fire, these Humors being Strongly indued with Fiery motions, so as the Stomach becomes like as a Foul Chimney set on a Flame, which causes the Humors like Soot to flie Upward, and some to fall Downward, and many times it Burns the whole House by their Violence; but if their Motions be not so Violent, then they onely move as Boyling Liquor, which Over-flows or Rises Higher than the Mouth of the Stomach; but the most Dangerous Effect is, when as these Humors Penetrate into the Substantial or Vital parts. As for the Remedies, when as the Stomach is Sick to Vomit, through any Undigested meat, or through

a Superfluity of humors, or when it is Sick to Vomit through a Pernicious humor, the beſt Remedy is preſently to give the Patient a Vomit, but if the Stomach ſtrain to Vomit through an Unnatural heat, the beſt Remedy is to Let the Patient Blood under the Tongue, and then in the Arm, and if the Stomach be apt to Vomit through a Weakneſs or Relaxedneſs, the Patient muſt have Reſtringent Cordials. As for Purging Fluxes, if the Flux be cauſed through a Superfluity of humors, or through ſome Evil humor, then the Patient muſt be Purged, and take Diet-drinks, alſo the Patient muſt be Kept to a very Spare Diet; if the Flux comes through ſome Exceſſive heat, as after Violent exerciſes, or the like, the Patient muſt be Let blood; if the Flux proceed from Weakneſs, or that the Bowels are too Relaxive, the Patient muſt uſe Reſtringent Diet, alſo he muſt be Purged gently with Rhabarb, which is both Reſtringent and Comforting, but in all ſorts or degrees of Fluxes, there is nothing better than Laudanum, ſuch as is prepared by Doctor *Davidſon*'s Preſcription; the Quantity muſt be from One Grain to Two and Three, but above Four muſt not be taken, and to put it in a Small Pill of Bread, and ſo Swallow it down; the time of Taking is, when the Patient goes to Sleep, but the Patient muſt not Eat nor Drink in Three Hours before the taking of it, and when taken, lie ſtill to Reſt: as for this Laudanum I have had Experience, for when I was in *France* with

with the Queen of *England*, I had Died of a Purging Flux, if I had not taken Doctor *Davidson*'s Laudanum, and he gave it me every Night for a Week together, and I was Cured.

CHAP. XLIV.

Of the Diseases in the Head, and Vapors to the Head.

DIseases and Swoonings, which are Diseases belonging only to the Head, differ as the Motions and Mixture, and Forms of Matter differ, for no Diseases, although of one and the same Sort, are just alike; but although these Diseases belong only to the Head, yet the Motions and Humors of the Stomach have greater Affinity to the Head, and many times cause the Diseases therein, by the Course and Re-course thereto and therefrom; for some Humors falling from the Head into the Stomach, do so Dis-affect that Part, as it returns more Malignity up again, and sometimes the Stomach begins the War, sending up such an Army of Ill Vapors, as many times they do not only Disorder the Head, but totally Ruinate it; but most commonly the Vapors, which ascend to the Head, are gathered by Contracting motions into Clouds, as Vapor is which ariseth from the Earth, and as long as the Vapor is in a Cloudy body, it makes that Part feel Heavy, and the Senses Dull by Obstructions, for it Stops the Nose, Dims the Sight, Fills

Fills the Ears, Blunts the Taſte, and Numbs the Touch, eſpecially if the Obſtruction be cauſed from a Cold Contraction, which Congeals the Vapor to an Icy Subſtance, but when it is Expulſed by a Hot Dilatation, it falls down like Hail, or Flakes of Snow, by which, I mean Cold Glaſſie Flegm, which Cold Flegm doth moſt commonly as Snow doth, which covers the Face of the Earth, ſo this Flegm covers, or ſtops the Mouth of the Stomach, and Deads the Appetite thereof; but the Danger is in theſe Cold contractions, that if they ſhould laſt too Long, they may cauſe Numb-palſies, or the like, and if Contracted, ſo as if one may ſay, Cryſtallined, it may cauſe an Incurable Dead Palſie; but if it be Diſpers'd by a Hot Expulſion, it is Diſſolved in Thundering Coughs, or Falls like Pouring Showers of Rain, Running through the Spouts of the Noſe, Eyes and Mouth, and through the Pores of the Skin, and ſometimes falls into the Bowels of the Body, the Stomach, and the Intrails; but if ſome of the Flood-gates chance to be Stopped by Obſtructions, theſe Showers may chance to Over-flow the Body, and make an utter Deſtruction, otherwiſe they only Waſh and Cleanſe theſe Parts; but if Vapors be Gathered by a Hot Contraction, they become Sharp and Salt, as being of a Burning quality; and if they be Diſperſt by a Hot Expulſion, they fall down like a Miſling Rain, which hath a Soaking and Penetrating faculty, Cutting and Peircing thoſe Parts they fall on,

by Insensible degrees, which Rots the Vital parts, not only by the Sharpness which Ulcerates, but by a continued Unnatural Weakness, which, if once the Parts begin to Decay, which is the Foundation, the Building must needs Fall.

CHAP. XLV.

Whether the Brain turns Round or not in the Head.

ALthough Thin Vapor may get betwixt the Skul and the Brain, and likewise Slimy Humor; yet I imagine not that the Brain is Loose from the Skul, so as to Flap, Flash, or to Strike against the sides of the Skul, when the Head is Moved, or to turn Round, although it is a common Phrase to say, My Brain turns Round in my Head, when they are Dissie; but I imagine it is not the Brain that turns Round, but the Vapor or the Humor therein; 'Tis true, the Brain turns Round, when the Whole body turns Round, but so as it turns Round with the Head, as one Part, not in the Head as a Part by it self; and the reason, that the Dissiness is Cured by turning the Contrary way, is, that the Sensitive motions therein are turned toward their Moderate, Natural, and Accustomed manner of Moving; for the Violence of turning Round, forceth the Sensitive motions, as the Wind doth the Air or Water, driving all one way,

way, as before it, or rather like a Scrue or a Wheel, that Winds up thoſe Motions, as Thread upon a Spindle, and ſo Unwinds the contrary way.

CHAP. XLVI.

Of the Sound or Noiſe in the Head.

WHen there is a Thin Vapor got into the Head, as betwixt the Skull and the Brain, and runs about in Circular lines as a String about the Wheel, it makes a Humming noiſe, as a Turning Wheel doth, and the more, by reaſon the Head as well as the Vaporous lines is Spherical; and though the Brain may ſtick cloſe to the Scul, yet not ſo Cloſe but a Thin vapor may get betwixt; but if the Vapor be gathered into Little Hollow balls like Cymbals, and runs about the Head, it cauſes a Noiſe like thoſe Cymbals, as a Tinkling or Gingling noiſe. But if the Vapor in the Head hath Intermitting motions, the Sound is like Muſical Inſtruments, for the Stops, like Notes, make the Diviſions; and according to the ſeveral Motions in the Head, is the Sound made therein, although the Ear is ſtopp'd without.

CHAP. XLVII.

Of the Head feeling Numb.

WHen the Skins which wrap up the Brain, as the *Pia Mater* and *Dura Mater*, are Contracted by an Inward cold, or an Outward cold, taken in at the Noſe, Ears, Mouth, or Pores of the Skin, they Shrivel, or are Drawn in as a Handkerchief, or the like, when we carry ſome Bulk within it, and when thoſe Skins are Drawn into a Straighter compaſs than the Nature is, it Preſſes upon the Brain, as being too Strait, wherein the Brain cannot freely Move. Beſides, the Veins and Little Small Strings that run about the Brain, being Contracted with Cold, the Blood in thoſe Veins cannot ſo freely Run, thoſe Strings being Shrunk, make the Brain feel as if it were ſo Hard bound, as to be Numb; but this doth rather Affright the Life of the Diſeaſed, than Deſtroy it, for a little Warmth, by Rubbing the Head, or a Hot Cloath laid on the Head, or ſome Warm Spoon-meat Cures it. Alſo Numbneſs may proceed from too much Blood in the Veins, or too much Matter in the Nerves, which being Too full, cauſe a Stopping, for want of Space or Room to move Naturally in, but this Numbneſs is not ſo eaſily Cured, eſpecially when the Oppreſſions lie in the Nerves, for Opening a Vein gives Liberty to the Blood,

but

but I know not how one ſhould ſo eaſily open a Nerve, neither is the Matter within ſo Liquid, as ſuddenly to run out; but this Numbneſs is rather of the Nature of a Dead Numbneſs, than a Sleepy Numbneſs.

CHAP. XLVIII.

Of the Seaſon and Diſeaſes of Winter.

IN every Seaſon there be all Sorts or Kinds of Diſeaſes, amongſt Animal kind, eſpecially that Animal named Man, but yet ſome Sorts or Kinds of Diſeaſes are more Frequent in ſome Seaſon of the Year than other; But Dividing the Year into Four Seaſons, as Winter, Spring, Summer, and Autumn, I will begin with the Coldeſt, as Winter. The Diſeaſes that are moſt frequent in the Seaſon of Winter are Coughs, Cathars, Tooth-akes, Rheums, as Running or Droping a Watery ſubſtance out of the Noſe, Eyes, as alſo the Mouth; Alſo this Seaſon breeds Apoplexies, Megrims, Lethargies, Palſies, Gangrenes, Cramps, Convulſions, Impoſtumes, and the like. As for the Winter ſeaſon, it is Strongly Indued with Cold contractions and Cold dilations, which cauſeth Froſt, Snow, Cold rains, and Cold winds; As for the Cold contractions, as they Contract the Moiſt Elements into a more Denſed body, than Naturally they ſhould be, ſo they do Animal bodies, which by Nature are Porous and Spongy,

gy, and ſome Parts Liquid and Wet; but by Cold contractions thoſe Parts that are Porous and Spongy, as the Fleſh, are more Hard and Denſed by Cold contractions than Naturally they are, and the Exterior Cold contractions work upon the Exterior parts of Animals, Contracting cloſe the Pores of the Skin and Fleſh into a Cloſer or Leſs Compaſs, and ſometimes cloſe up thoſe Porous paſſages, which Hinders them from all Intercourſe, which Hinderance cauſes many Diſeaſes, by reaſon the Superfluous matter in the Body cannot Paſs out, nor Refreſhing or Reviving matter cannot Enter in, as through the Pores; for through the Pores of the Fleſh Paſs and Repaſs the moſt Rare ſubſtances Into or From the Body, as Water, Vapor, and External heat, and Sweat, Smoak, and Internal heat. But it is to be obſerved, that the Natural heat Bred in the Body, and the Nouriſhing food Taken into the Body, Begets or produces both Vital and Radical vapor, which the Learned Phyſicians name Animal and Vital Spirits; alſo the Natural heat and Ordinary food begets or produces Superfluous vapor, which Superfluous vapor, when as it cannot Iſſue forth of the Body, doth become Groſs, Corrupt, and Malignant, as alſo Over-powerful and Deſtructive; But for Diſeaſes, I will firſt begin with Rheums, which are very frequent in Winter-ſeaſon, wherein the Pores of the Body are ſtopt by Cold contractions, which cauſes the Pores of the Skin and Fleſh to be like

like as a Luted Alembick, or like as a Glass-Still set a Working, for the Daily Food and Natural Heat in the Body Operating together, the Natural heat Separates the Several parts of the Food, Densing some and Rarifying others, whereof some are Necessary for the Consistence of the Body, and some others of those Parts are Superfluous, for which Superfluities there are Natural Passages in every Animal Creature to Issue out, whereas the Rarest and most Rarified parts Issue through the Pores of the Flesh, which Pores when as they are Stopped either by Exterior or Interior Contracting motions, they cause divers Diseases; for when as those Rare Superfluous parts, as Superfluous Vapors Dilatate by a Natural Dilatation to the Circumference of the Body, finding a Resistance through the Obstruction or Contraction of the Porous doors or passages, Depress or Recoil, which Depressions cause the Dilatating vapors to Contract into a Dew, and then into a Water, which Water being Unnecessary and Superfluous, causes a Disorder in the Body, unless it can find a Passage out, which sometimes it doth, but not always; but for that Vapor, that Ascends to the Head, and is Depress'd in the Head, like as the Top of a Still, the Water which is made there, is apt to Drop or Run through the Nostrils of the Nose, or through the Corners of the Eyes, or out of the Mouth; but if there be more than can be Vented through those Passages, it Falls into the Lungs, or into the Stomach,

or

or other Parts, like as Misling Rain, all which causes Coughs, Pozes, Spitting, Difficult Breathing, and the like; but for Difficult Breathing, it is caused by the Stoppage of the Wind-pipe, which the Falling Rheum or Water causeth: But if the Superfluous Vapor that should Pass through the Pores, and cannot Pass, but Remains in the Body, where by Time and Change of Motion it becomes from Thin Vapor to Thick Vapor, from Thick Vapor to Water, from Water to Slime, from Slime to Flegm, from Thin Loose Flegm, to Thick Hard Flegm, it causes Unnatural Obstructions in the Several parts of the Body; but when as that Superfluous Vapor or Matter hath Several sorts of Motions working in it, as some Hot, and some Cold Contractions, also some Hot, and some Cold Dilatations, Digestions, and the like, it causes that Vapor to become of a Corrupt Substance, as partly of one Substance, and partly of an other, for in all Corruptions there is an Irregular Mixture of several Motions, which causes several Distempers of the Matter, and so several Diseases, whereof Impostumes one sort. But if the Superfluous Vapors do Superabound, and Ascend up to the Head, they Choak the Brain, and the Interior passages and Vital parts of the Head, which causeth Apoplexies, Megrims, or Lethargies, especially if the Vapor be Gross, and when as the Vital or Radical vapor, which is named Spirits, is Contracted by an Unnatural Cold contraction, there proceed Gangrenes

grenes in thoſe Parts, where thoſe Contractions are made; and when as by the Exterior Cold contractions, or Interior Cold contractions, the Pores which are the General Doors or Paſſages of the Body, or in ſome Part of the Body, are quite Shut or Cloſed up, there muſt neceſſarily proceed a Dead Palſie in thoſe Parts, or in the Whole body, by reaſon all Senſe of Touch Lives in thoſe Paſſages, Doors, Parts or Places, namely the Pores of the Fleſh, but if thoſe Paſſages or Pores be but Partly Unnaturally cloſed, they only produce Numb Palſies, which may become Dead Palſies in time. But all theſe Diſeaſes may be made by Hot contractions, or Hot dilatations, as well as Cold, if they work to the ſame Effect; as for all Sorts of Rheums, they are partly made by Contractions, and partly by Dilatations, as my Readers may obſerve in my former Diſcourſes of Looſe Elements and Humors.

CHAP. XLIX.

Of the Seaſon of the Spring, and the Diſeaſes moſt Frequent therein.

THat Seaſon of the Year, which is named the Spring, is more Strongly indued with Attractive, Digeſtive, and Dilative motions, than it is with Expulſive, or Retentive motions; by reaſon it is the chief Seaſon of Creation, but yet theſe Attractions, Digeſtions, and Dila-

tations, are inclining more to the Hot than the Cold temper; in truth, it is a Time or Seaſon, when as all Motion is the moſt Equal Mild or Temperate, and yet there be many Violent Diſeaſes in this Seaſon: the reaſon is, that many Diſeaſes, that were Bred in the Winter Seaſon, do appear in the Spring Seaſon, as being not brought to Maturity untill the Seaſon of the Spring, for Superfluous vapors wanting Vent, not only breed Diſtempered humors, but have Diſtempered the Natural and Well-tempered humors by Irregular motions. The Diſeaſes that are moſt Frequent in the Spring, are Agues, Pluriſies, Green-ſickneſs, or Short-breathing, Conſumptions, Pains in the Stomach and Head, and many ſuch like Diſeaſes, all which are by Inward Corruptive Obſtructions, and Irregular motions, cauſed by the Unnatural Contractions of the Exterior pores or paſſages of the Fleſh, and Skin of the Body.

CHAP. L.

Of the Seaſon and Diſeaſes of the Summer.

THat Seaſon or Part of the Year, named Summer, is Strongly indued with Hot dilatations, and Hot contractions, and the Diſeaſes that are moſt Frequent in this Hot Seaſon, are Phreneſies, Burning-feavers, Plagues, Spotted-feavers, Small-pox, Meaſles, Scabbs, Leproſies, and all Exterior Swellings, Sores, and Pains,

Sweating,

Sweating, Faintneſs, and Swooning, all which Diſeaſes are made or produced by the Exceſs of Hot motions; for when Several ſorts of Motions do not work Equally, according to the Matter they work On, or the Creatures they work In, they cauſe a Diſtemper and Irregularity of and in the Natural humors and Vital parts of the Body; and the ſeveral Diſeaſes are made or produced by Exceſſive Hot contractions, but the breaking forth of thoſe Diſeaſes is by the Exceſſive Hot dilatations, for the Dilatations drive thoſe Diſeaſes either Wholly or in Part, unto the Extreme parts, and if the Dilative motions be Stronger than the Contracting motions, thoſe Dilatating motions Drive or Carry thoſe Diſeaſes ſo Clearly and Generally out to the Extreme parts, as they leave none of the Diſeaſe, or otherwiſe ſo little of the Diſeaſe in the Body, as not to Indanger the Vital parts in the Body; but in many Bodies there is great Strife betwixt the Hot Contractions and Hot Dilatations, in which Strife the Body ſuffers much Pain and Sickneſs, and according to the Victory of either ſort of Motions the Body Lives or Dies; for if the Exceſſive and Irregular Contractions, which are the Cauſe of thoſe Diſeaſes, get the Better, the Body Dies, by reaſon the Contractions keep the Diſeaſe ſo near the Vital parts, as they become Infected with the Diſtemper of the Diſeaſe; but if the Exceſſive Dilatations (for if the Dilatations were not Exceſſive, they could not Diſpute with the

Exceſſive Contractions) have the Victory, either by their own Proper Strength, or by ſome Aſſiſtance, the Body Lives, for Dilatations Drive out all Malignity beyond all Danger. But all Dilative medicines are beſt, onely the Difficulty is to Underſtand, what Medicine or Matter is Indued moſt with ſuch or ſuch Motions, but Experience, Time, and Trial will Inform the Underſtanding much. But, this is to be obſerved, that ſometimes two or three Diſeaſes will joyn together in one Body; alſo it is to be ſerved, that ſome Bodies are Weak, or that ſome of the Vital parts were Decayed, before any of thoſe Diſeaſes were entred into them, or were made in them, and when the Diſeaſe joyns with the former Imperfections or Decays, and the Body Dies, Phyſicians or other Acquaintance judge, their Death was cauſed Abſolutely of that onely Diſeaſe, and that there were no ſuch Remedies, as might be Applied to the Sick Perſon, and the Friends of the Dead man are apt to Complain of, or Condemn the Phyſician for want of Skill, or that he hath been Negligent, although there could be no Remedy to Cure that Sick perſon, nor no Reprieve from Death could be made; and on the other ſide, when as a Diſeaſe ſeizes on a Well-tempered, or Sound-bodied Man, and that his Strong and Well-tempered parts and Regular motions are too Strong for his Diſtempered Diſeaſe, Humors, or Parts, and the Sick man Recovers, then the Friends of the Sick man Commend and Approve

Approve of his Physician, saying, He was the onely Cause of his Recovery, when as it was the Man's own Sound or Strong Constitution of his Body, at least his Constitution did help the Physician's Art to Recover the Sick man to Health. Thus we may perceive great Mistakes concerning Diseases, and not onely Mistakes in the Parts of the Body, but oftentimes in the Nature of the Disease, as also the Remedies; Wherefore this Study of Physick is a Difficult Study, and the Practice of a Physician requires great Observations and Experiences, as also Diligence.

CHAP. LI.

Of Autumn, and of those Diseases that are most Frequent therein.

AUtumn is Strongly indued with Expulsive motions, in truth, that sort of Motions seems chiefly to Rule or Predominate, and those Diseases, that are most frequent in that Season, are Fluxes of all Sorts and Kinds, and for the most part the former Summers Excessive Contractions are one of the Causes of the Autumns Excessive Expulsions, for one Extreme changes into another Extreme; also it is to be observed, that the Nature and Motions of the Spring is to Create and Unite, and it is the Nature and Motions of the Autumn to Dissolve and Expulse; for there are many Things and Creatures

Creatures that the Spring Makes, which the Autumn Destroys. As for Diseases, it is to be observed, that the Luxurious Appetites of Men in Feeding on the Delicious Fruits of and in the Summer-Season, are the Cause of many Diseases; some through Surfeits, and some through the Disagreeing Substance of those Fruits received into the Body.

CHAP. LII.

Of the Infections of Animals, Vegetables, and Elements.

SUch Motions as Corrupt Animal bodies, Corrupt Vegetable bodies, and as Corrupt and Malignaut Air is Infectious to Animals, so likewise to Vegetables; and as Malignant diseases are Catching and Infectious to those that come near them, ~~so~~ oftentimes Vegetables are Infectious to Animals, as Herbs and Fruits, which cause some Years such Dangerous Sicknesses and Killing Diseases to those that Eat thereof; Likewise those Bodies that are Infected, do Infect Sound and Nourishing food, when once it is Eaten, causing that, which is Good, also to become Malignant, when once in the Body.

CHAP.

CHAP. LIII.

The Superfluities of the Humors, as Flegm, Choler, Melancholy, and Blood.

THe Looſe and Neceſſary humors in Animal bodies, are Flegm, Choler, Melancholy, and Blood, but when as any of theſe Looſe humors Superabounds, that is, when as there be more of any one of theſe Humors, than the Nature of the Body requires, that or thoſe Superfluities of Humors do Diſtemper the Body, cauſing many Diſeaſes, as Feavers, Agues, Impoſtumes, Conſumptions, Stone, Fluxes, Convulſions, Apoplexies, Megrims, and the like; and when theſe Superfluities Dilatate to the Extreme parts, they cauſe Cancres, Gangrenes, Fiſtulaes, Wenns, Kings-evils, Wolfes, Scabbs, Itches, and the like; and when they Superabound ſo much, as to Infect the Inward parts, as alſo to Dilatate to the Outward parts, they cauſe Spotted-feavers, Plagues, Small-pox, Meaſles, Leproſies, Gouts, and the like; and ſometimes the Infection of the Inward parts Dilatates to the Outward parts, and ſometimes the Dilatated humors from the Outward parts Fall back, or Penetrate inward, and Infect the Inward parts. But it is to be obſerved, that the Motions of the Humors Vary and Change not only in Several parts of the Body, but from one Humor into an other; alſo it is to be obſerved,

that

that these Humors often Intermix one into an other, which may easily be perceived by the Nature of each Disease, as to find or perceive, whether they be Compounded or Intermixt diseases, or a Disease of a Single humor; also it is to be observed by Human sense and reason, that the Intermixing and Conjunction of Several Humors by Irregular motions doth many times beget a Deformed humor, that is, an Unnatural humor, as a Humor that is Hurtfull and Dangerous, if not Destructive to the Body. But the Veins are the Reception for the Blood, the Gall is the Reception for the Choler, the Splene is the Reception for Melancholy, the Brain is the Reception for Flegm; but the truth is, that all those Humors are Intermixtly in all Parts of the Body, and it is Natural for those Humors to be so, but that which is accounted Unnatural, is for any of the Humors to Superabound, as not to keep in such a Proportion, or as when they Intermix Crosly, as Untimely, Unequally, or Irregularly, all which causes many Several Diseases. But as these Humors are of several Tempers, several Degrees, several Motions, several Functions, so several Colours, and several Tastes, as Yellow, Green, Black, Red, White, Bitter, Sharp, Salt and Sweet.

CHAP.

CHAP. LIV.

Of those Parts of the Veins, which draw Nourishment in the Body.

WHen as the Veins are too Full of Blood, the Mouth-veins cannot Draw according to their Proper faculty from those Parts of the Body, that they should draw Nourishment from; also when the Mouth-veins are Weak, they cannot Draw a sufficient Nourishment to make Blood, neither when that they are Obstructed; but mistake me not, I mean those Parts of the Veins as draw Nourishment from the Liver, or other Parts; but from Fulness, Weakness, or Obstruction, proceeds Corruption of Parts, Impostumes of Blood, Breaking of Veins, or Emptiness in Veins, which causes the Body to be Weak, Faint, Lean, Pale, and Ill-coloured; also it causes Quinzies, and Sore Throats, and many the like Diseases. But the Veins may be too Full of Blood, not only to Hinder or Retard the Attracting motions of or in the Veins, but the Intermixing and Digesting motions of the Blood, causing the Blood to be Corrupted, or too Thick and Cold, for the Blood may Agitate too Little as well as too Much, which may cause Numbness or Deadness of Parts, which is called Numb or Dead-palsies, and Apoplexies, and many such Diseases, whereas the too much Agitation of the Blood

causes Hectick Feavers, and other Feavers; but this is to be observed, that in most Diseases, Letting blood is very Good and Profitable for the Sick Patient.

CHAP. LV.

Of the several Motions in an Animal Body.

WHen a Body is in Perfect Health, the Motions therein do not only work Regularly and Proportionably, Placing every Part of matter Rightly and Properly, Mixing and Tempering the Matter as it should be, or as I may say, Fitly, that is, when the Quantity of Matter or Humor is Proportionable, and the Motions move Equally; for though every Kind or Sort of Motion may move Evenly, and keep Just time, yet not Equally, or Harmoniously; as for Example, say there were a Company of Musicians, and every one Played Skilfully, Justly, Tuneably, Timely, on the same Notes; yet may there be too many Trebles for the Tenors and Bases, or too many Tenors for the Trebles and Bases, and too many Bases for the Tenor and Treble to make an Harmony: So in the Body there may be too much of one, or more Kind of Motions for other Kinds to make an Harmony of Health, as for Proof, too many Contracting motions make the Body too Dry, and Contract Diseases; as for Example, if instead of Binding any thing, we should Break it by

by Pulling or Drawing too Hard together, or inſtead of Joyning of Parts, we ſhould Knock them ſo Cloſe as to Rive or Split them, or inſtead of Gathering ſuch a Quantity of Matter, or Joyning ſuch a Number of Parts, we ſhould gather Twice or Thrice the Quantity; Numbers of the like Examples might be given, for all other Kind of Motions, as Dilatating or Expulſive, inſtead of Throwing out the Superfluities or Rubbiſh in a Houſe, we ſhould Pull down the Houſe, and Diſperſe the Materials therein, Digging up the Foundation thereof. Likewiſe too many Dilatating or Expulſive motions may Diſperſe or Divide Parts, or Unſettle or Unground Parts, which Diſunites, Weakens, and Diſſolves Parts or Bodies. Wherefore all Contracting, Attracting, Retentive, Digeſting, Dilatating, Expulſive motions in a Well-tempered Body, muſt move like the ſeveral Planets, every Sort in there Proper Spheres, keeping their Times, Motions, Tempers and Degrees; but too Many or too Strong Contracting motions cauſe the Gout, Stone, Pluriſie, Hectick Feavers, Numb and Dead Palſies, Dry Liver, Brain, and many the like; and too many Dilatating motions cauſe Dropſies, Wind-collicks, Rheums, Shaking Palſies, Sweats or Fainting ſickneſs, and Millions the like; and too Many or too Strong Expulſive motions cauſe Fluxes, Vomiting, Bleeding, and the like; and too Many or too Strong Digeſtive motions cauſe too much Blood, Fat and Fleſh,

which is apt to Choak the Vital parts, or may Nouriſh ſome Particular parts ſo much, as may make them Grow and Swell out ſo Big, as they may be Diſproportionable for the reſt of the Parts in the Body. But ſtill I muſt Remember my Readers, that all Dilatating motions are in the way of Expulſion, and all Attractions in the way of Contraction, and Digeſtions are Mixt motions taking Part from either ſide; then I muſt Remember my Readers, that there are Infinite ways or manners of Contractions, and Infinite ways or Manners of ways of Attractions, and ſo of Retentions, Dilatations, Expulſions, and Digeſtions, where every Change makes a ſeveral Effect.

CHAP. LVI.

Of that which Phyſicians name the Animal or Radical and Vital Spirits in Animal Bodies.

THoſe Humors or Parts Of and In the Animal bodies, which are named by Phyſicians to be Radical and Vital ſpirits. As for the Radical part, 'tis the Rareſt and Subtileſt Humor or Part in the Body, and it is not onely the moſt Rarifi'd part, but the moſt Clarifi'd part, it is the Fire and Flame of the Body, that gives the Body a Natural heat, and hath a Cleanſing and Purifying faculty, which is Sympathetical to the Nature, and Cleanſes and Purifies the Body generally throughout. There is no more

Difference

Difference between the Vital and Radical ſpirits, but onely the Vital are ſomewhat Groſſer than the Radical, as much as between Oil and Flame; Theſe Parts are made by ſuch Dilatating motions, as make pure Oil or Eſſence, as alſo Flame and Heat, the Vital is the Oil, the Radical is the Flame of that Oil; But ſo Neceſſary this Part of the Body is to the Whole Body, as when this Flaming Oily matter is Quenched out, or Put out by other Matter or Motions in the Body, the Body dies, that is, the General and Natural motions proper to the Animal body change, and the Body Diſſolves. But, to conclude this Chapter, the Radical and Vital ſpirits are the Natural Aquavitæ or Brandwine of the Body, or the Natural Oil or Eſſence of the Body, as alſo the Natural Fire and Flame of all Animal bodies.

CHAP. LVII.

Of Cordials and Opium.

ALL Cordials work Sympathetically upon the Vital and Radical matter or Spirits in Animal bodies, by reaſon all Cordials have Inherent Virtues, or are Indued with ſuch Temperaments and Motions, as the Radical and Vital Matter and Spirits have, which is the cauſe, that when ſuch Things as are named Cordials, are given to Animal Creatures, they many times add much Strength to the Radical and Vital humor

humor and motions; but Opium hath a Strong Antipathy to the Radical humor or Spirits, for it is apt to Put out the Flame, at leaſt to Suppreſs it, and to Over-power the Agil motions in that Radical matter, which is the cauſe, that when Opium is well prepared with other Ingredients, that it works Strange Beneficial Effects to thoſe Animals that are in Feavers, or that are Diſtracted; for in Feavers, the Spirits Flame too much, ſetting the whole Body a Fire, or the Unnatural heat in the Body helps to Burn out the Vital or Radical matter faſter than it ſhould Burn; alſo in Feavers the Motions of the Spirits are apt to move too Quick; the like in Madneſs, all which Opium is apt to Suppreſs, and by the Suppreſſion cauſes the Motions in the Spirits and Body to work more Slower, and then more Regularly.

CHAP. LVIII.

Of Pleaſure and Pain.

ALL Evacuations have Expulſive motions, if the Expulſive motions be Regular, it is Pleaſure; if the Expulſive motions be Irregular, they cauſe Pain; for all Irregular and Croſs Senſitive motions is Pain, and all Regular motion is Pleaſure: Indeed Pleaſure and Pain is a Harmony or Diſcord of Senſitive motions.

CHAP.

CHAP. LIX.

The Nature of Purging Medicines.

MOst Purging Druggs are of the Nature of Hot Burning Fire; for the Inherent motions therein Work according to the Humor or Matter it meets with, ſome Humor they Melt, making it Thin and Fluid, although it be Hard, Tough, or Clammy, as Fire doth Oar, which is Unmelted Metall, making it ſo Fluid, as it will run through a Gutter of Earth like Water: So do ſome Druggs make ſome Sorts of Humor run through the Body, either Upward or Downward. Again, ſome Druggs will Work upon ſome Humors, as Fire upon Wood, dividing the Humor into Small parts, as Aſhes from Wood, which Naturally falls Downward: and ſome they will Diſſolve by Mouldring and Crumbling, as Fire doth Stone, which runs forth like Sand, which is Stone indeed Bred in the Body. Some Druggs Rarifie the Humors into Wind, as Fire will Rarifie, and Evaporate Water, which is ſet Boiling thereon. Other Druggs will Work as Fire, that Diſtills out the Moiſt and Watery Subſtance from that which is more Groſs; But it is to be obſerved, that all Purging Druggs that work by Vomit, are ſomewhat of the Nature of that Kind of Fire we call Sulphur, or Oyl that is Melted, or Fluid Sulphur, when theſe Sorts of Druggs are ſet on Fire, as I may ſay,

fay, by the Natural or Diſtempered heat in the Body, it Flies out Aſcendingly, like *Ætna*, for it is of the Nature of Sulphur to Aſcend as Flame doth; and certainly, all Bodies have ſuch Motions Naturally Inherent in them, as make and produce ſuch Effects, as Fire doth, on ſeveral Sorts of Humors, by which Motions the Body hath a Natural Cleanſing faculty, which makes the Natural Purging quality; but when the Motions are too Violent, they oftentimes Deſtroy the Body with Burning-feavers, or Violent Fluxes, or the like; for the Fire in the Body is like a Fire in a Chimney, for when the Chimney is Clean, and the Fire Proportionable to Lie therein, it Warms and Comforts all about, and is Uſefull for many imployments for the Neceſſaries of Life; but if the Chimney be Foul, or the Fire too Big, or too Much for the Chimney, it Sets all in a Flame, Conſuming whatſoever it Incompaſſes, if it be not Quenched out with Cooling Julips, as with Water, or by Caſting on Rubbiſh, or Groſs materials, to Smother it out; as in great Fluxes, they will not only give Reſtringent medicines, as having a Natural Reſtringent faculty, but Thick meats, as Thicked milk, or the like: but when the Body is Reſtringent, or hath taken Reſtringent medicines, it is produced by Drying motions, as Contracting or Retentive motion, if they be Hot Retentive or Contracting motions, they Harden and Confirm the Humors, as the Heat of the Sun, or the Heat of the Fire doth Clay,

which

which turns it to Brick or Tile, or thoſe things we call Earthen Pots; and according as the Humor is Groſs or Fine, the more Brittle or Hard, or Thick, or Heavy, or Thin, or Light it is; for ſome Humor is as Purcelline, or Chiney, others as the Groſſer Earthen Veſſels. Again, ſome Sorts of Contracting or Retentive motions draw the Humor, as when Bacon, Neats-tongues, or the like, are dried in a Chimney, or Oven, or the like; Other Sorts of Hot Contractions draw the Humor, as the Sun doth the Earth, drying up the Watery Spring therein; But if the Reſtringencies either of the Body, or of the Medicines, be cauſed by Cold Retentive or Contracting motions, it Dries the Humors, as Cold Froſt dries the Earth, or Binds up the Humors, as Froſt binds up the Waters in Icy Fetters, or Thickens the Humors, as Cold Thickens the Water, or Vapor drawn from the Earth into Clouds of Snow. But I am to Advertiſe my Readers, that all Expulſive motions are not Fiery Expulſions; for there are Infinite ſeveral wayes of Expulſive motions and dilatations. Secondly, theſe Fiery motions do not always work Expulſively, but Contractively, Attractively, and Retentively, and Digeſtively. Thirdly, all Expulſive, Dilative, Digeſtive, Contractive, Attractive, Retentive motions are not Fiery, but there is ſuch a Kind or Sort of Contractions, Attractions, Retentions, Digeſtions, Dilatations, and Expulſions, as belong to Fire or Heat, or as I may better ſay, produce

Heat or Fire; and as I ſaid, there are Infinite ſeveral ways of each Kind of Motion; as for Example, I will treat of one of them: a Bee gathers Wax, a Bird gathers Straw, and a Man gathers Sticks; the Bees gather and carry the Wax to the Hive to make a Comb, to Lay or Hold and Keep the Honey; the Bird gathers and carries the Straw to Build a Neſt, to Hatch her Young ones in; the Man gathers Wood to Mend his Houſe; theſe all Gather to one End, but yet Several ways; for the Bees gather the Wax, and carry it on their Thighs; the Birds gather the Straw, and carry it with their Bills; the Man gathers with his Hands, but carries it Several ways, as on his Head, or on his Shoulders, or at his Back, or in his Arms, and millions of the like Examples may be given upon each Kind or Sort of Motion or Moved matter. Again, I muſt Advertiſe my Readers, that, though I ſay, there are Fiery motions in Druggs, and Natural Fiery motions in every Animal Creature, and ſo in many other Figures; yet I mean not a Bright-ſhining Fire, although ſome are of Opinion, that in the Heart is a Thin Flame, and when that is Put out, or Goes out, the Creature Dies; but I mean not ſuch a Fire, for to my Apprehenſion there are three Sorts of Fire to our Perceivance, although there may be Numberleſs ſorts, yet all of one Kind; as for Example, there are thoſe Creatures we call Animals, though ſome are Beaſts, Birds, Fiſh, and Men, but not only ſo, for ſome are of one Sort,

Sort, and ſome of another; for a Lennit is not a Parot, nor a Parot an Owl, nor a Horſe a Cow, nor a Sheep a Dog, nor a Whale a Herring, nor a Herring a Plaiſe, nor a Plaiſe a Lobſter, nor a Black-more is not a Tauny-more, nor an European an Ethiopian, yet all are of Animal kind; So although there may be ſeveral Sorts of Fire, and ſo of the other Elements, yet all are of the Fiery kind; likewiſe the Fiery motions make Several Figures, and Several Figures have Several Fiery motions; for every Sort of Animals hath a Several Shape, and Several Motions belonging to that Shape: So in Fiery figures and Fiery motions; but, as I ſaid before, there are three ſorts of Fire: The firſt is a Bright-ſhining, Hot-burning Fire, that is, when the Interior and Exterior Temperament of Matter, and the Interior and Exterior figure, and the Interior and Exterior motions be all as one. The ſecond is a Hot-burning Fire, but not a Bright-ſhining Fire, ſuch as Aqua-fortis, Vitriol, and ſuch ſorts of the ſame Nature, which will burn as Fire doth, but not after that Swift and Sudden motion; for though they are both of an Interior nature, yet not of an Exterior, for the Bright-ſhining Fire is all Compoſed of Sharp points, as I may ſay, Lines of Points, but the Vitriol Fire is as Sharp-edged Lines, like a Raſor, or Knife, or the like; neither are their External motions alike, for Bright-ſhining Fire mounts Upwards, when it is not Suppreſt, or in a Straight Parallel line, for

Flame, which is the Liquid part of Bright-ſhining Fire, although it moves in ſeveral Lines as it Aſcends, yet the Lines they Aſcend in, are Straight Diameter lines; but this Vitriol-fire Deſcends, as it were, Downwards, or Divides as Streams of Water do, that Dig themſelves a Paſſage thorow the Earth, ſo this Vitriol cuts a Paſſage thorow what it works on; neither can this ſort of Fire work ſo Variouſly as Bright-ſhining Fire can, by reaſon it hath not ſo many Parts, for Points will fall into more Parts, and are more Swift in Motion, than the Edged-lines; as for Example, Duſt, which is Numerous Little Parts heap'd together, will be more Agil upon the Leaſt motion, although it be of a Weighty Nature, as of the Nature of a Stone, than ſmall Hairs, which be of a Light and Weightleſs nature, but being not Divided into ſo many Parts, cannot move ſo Nimbly, as being United Lines; but if you Cut the Hair into Small parts, it ſhall Move with more Reſtleſs motion, than the Sand, by ſo much the more as the Subſtance is Lighter. The third ſort of Fire is that which I call a Cold Dull Fire, ſuch as Brimſtone or Sulphur, Mercury, Salt, Oil, or the like; This Sort in the Interior nature is of the Nature of Bright-ſhining fire, both in the Motions and Temperaments of Matter; but not in the Exterior, for it is compoſed of Points, but thoſe Points are turnward Inwards as toward the Centre; but as ſoon as it touches the Bright-ſhining Fire, it

ſtrait

ſtrait turns the Points Outward, for thoſe Points ſoon catch hold of thoſe Straight Circumferent Lines, and Break them in ſunder, which as ſoon as they are Broke, the Points are at Liberty, and taking their Freedom, they Mount in a Flame; but when thoſe Lines are not Diſſolved by Fire, but Crack, as we will Snap a String aſunder, then they onely Sparkle Fire out, but not Flame; but of Mercury or Quick-ſilver, the Interior nature is Fire, but the Exterior is Water, for the Exterior moves in Extenuating Circles as Water doth, and ſo much as to make it Soft and Fluid, but not ſo much as to make it Wet; for though it always gathers into Spherical Figures, which ſhews, that the Exterior would run into Wet, but that the Interior hinders it by Drawing the Circles Inward, as Cold doth Water into Hail-ſtones, yet the Interior wants the Force to make it ſo Hard and Firm; but, as I did advertiſe my Readers before, that all ſorts of Fire work according to the Matter they meet with, yet none works ſo variouſly as the Bright-ſhining Fire, which makes me think, that Drugs are more of the Nature of Bright-ſhining Fire, than of the two other Sorts, becauſe they Work in the Body according to the Humor they meet with, for if they meet with Wateriſh humors, they Boil them as Water in a Pot, which either Boils over the Mouth of the Stomach, or Evaporates out in Sweat like Dew, or Draws Downward, like as in Showers of Rain; or they

Melt

Melt Humors like Metall, or turn Humors like Wood into Aſhes, or Calcine the Humor, where ſome Part is Fixed, other Parts are Volatile; as for Example, Rhabarb hath a double Faculty, ſome Humors it Expels out, others it Binds up; for Rhabarb is both Purging and Reſtringent, as it is to be obſerved in great Fluxes; for what it doth not Caſt forth, it Confirms to a more Solid Subſtance, ſo as it doth Expulſe and Contract at one time, as I may ſay, according as it finds the Humor it works with. Again, ſome Drugs move Several Expulſive ways, as by Vomit and Stool, where the Vomiting is Produced with Aſcending Expulſions, Siege with Deſcending Expulſions, but the Deſcending Expulſions are of the Nature of Vitriol Fire, all that Expulſes Aſcendingly, is of the Nature of Sulphureous Fire; but the Generality of Druggs works like Bright-ſhining Fire, according to the Nature of the Matter it meets with, as I have formerly deſcribed.

CHAP. LX.

Of the Motion of Medicines.

AS I have ſaid in my former Chapter, that all Medicinal Druggs, or Simples, eſpecially thoſe that Purge, are of the Nature of Fire; for the Motions therein moſt commonly Work a-part, according to the Humor they meet with, as Fire doth, which in General is to Move ſo and ſo;

ſo; yet the Natural motions in Druggs, and likewiſe in Fire, are Expulſive, and all that is Expulſive, is by Antipathetical nature, Striving to Deſtroy United parts, and all Contractive motions are by a Sympathetical nature, Striving to Unite by Imbracing or Drawing parts together; yet according to the Nature of the Body they Work in, the Contracting motions may be Antipathetical, and Expulſive motions may be Sympathetical, the one in Expelling the Superfluous and Corrupted humors, the other in Contracting them into a Diſeaſe, but moſt Diſeaſes are Cured by Contrary motions; for if they be Diſeaſes of Expulſions, they muſt be Cured by Contracting or Retentive medicines; if they be Diſeaſes of Contractions, they muſt be Cured by Expulſive medicines, or elſe Dilatating or Attracting; for though the Motions of Attraction be Agreeable, or of the Nature of Contraction, that is, to Draw or Carry all to a Centre, the only Difference is, that Attraction makes it ſelf the Centre, drawing all things to it, but Contractions make the Matter they Work on, part of the Centre with them; but all Attractions are Inſinuating motions, Inviting and Drawing all toward Themſelves, or like a Man that ſhould Draw a Diſh of Meat, or as if one ſhould Suck a Breaſt or Udder, but Contracting motions are rather to Bind, or Knit up Parts together; but if the Diſeaſes proceed from Diſ-uniting motions, then Retentive medicines muſt be Applied, which are to Firm,

Hold,

Hold, or Settle parts that are Looſe & Unſteddy; but if the Diſeaſes proceed out of Diſorder and Irregularity, they muſt be Cured by Digeſtive medicines, which is to put every Part in Order, and in its Proper place; Like wiſe States-men, that are neither Partial nor Malicious. But Readers, know, that though I ſay, all Diſeaſes muſt be Cured by Contrary motions, yet the Motions that are in ſuch Medicines, muſt Sympathize and Agree with the Conſtitution of the Body. Laſtly, it is to be obſerved, that every Degree in the Diſeaſe muſt be followed with the ſame Degree in the Medicine, whether Swift or Slow, Strong or Weak, More or Leſs, that is, you muſt match your Medicines to the Diſeaſe; but all Purging medicines are Dilative or Expulſive; all Reſtringent medicines are Contractive and Retentive; all Drawing medicines are Attractive; all Reſtorative or Reviving medicines are Digeſtive; and thoſe Contracting medicines that muſt Cure the Body, muſt Sympathize with the Natural Health, and Conſtitution of the Body, not with the Diſeaſe, for theſe Motions Draw, Gather, or at leaſt Knit and Bind up the Sound parts from the Corrupted parts, leſt they ſhould Intermix; and Retentive remedies do not only Stay thoſe Parts, that are apt to Diſ-unite, but give Strength, and hold out the Aſſaulting motions in Miſtempered matter; and all Attractive medicines that Sympathize with the Natural Conſtitutions of the Body, Suck and Draw forth from the Corrupted

ted matter, the Pure, which is mixed or involved therein; but those Attractive and Drawing medicines, that are applied to Outward Sores, or the like, must have a Sympathy with the Malady or Putrefaction, for all Aversions do cast Outward, or From them, not draw To them. As for the Expulsive Remedies, they must carefully be applied, lest they should cast forth the Wrong Humor, by which the Malignant grows more Powerfull, or else they should carry out more Humor than the Strength of the Body will permit, or should be so Weak, or of such a Nature, only to Disturb and Unsettle, but not Carry forth, from which Disturbance great Inconveniences or Deadly quarrels in the Body may arise; Wherefore, these Medicines are more Dangerous than any other Sort, although no Medicine can be Safely applied, unless the Strength and Nature be answerable to the Constitution of the Body, or the Diseases in the Body, no not those we call Restorative or Reviving remedies, which work Digestively, such as Cordials, or the like, for when there is more Applied than will agree with the Constitution of the Body, or with the Temper, or Degree of the Disease, they turn from being Assisting Friends to Assaulting Enemies, for when they have more Force than Regular work, they put in Disorder those Regularities for want of Regular imployment; for it is against the Nature of Animate matter to Desist from Moving or Working, but it is not against Nature to Change

and Alter the Motions. The ſeveral Degrees and Natures of Druggs of every particular Drugg and Simple, I leave my Readers to Learn from the Herbal, where perchance ſome of it may be Diſcourſed of Rightly or Effectually, howſoever it is too Laborious a Study or Practice for me.

CHAP. LXI.

Of Purging.

ALL Purging Druggs have more of the Penetrating and Subdividing motions and qualities or proprieties, than of the Attractive motions or proprieties; for it is not the Drawing together of ſeveral Humors, that Purgeth the Body, but the Dividing and Looſening the Humors, and then by Expulſive motions Driving all out of the Body; for all Purging and Evacuating Drugs or Medicines work according to the Matter and Motions they Incounter with in the Body of the Animal; but ſuch Medicines, which we name Cordials, work more Sympathetically, for though the Motions in the Matter or Subſtance of Cordials, work Antipathetically with the Irregular motions and Miſtempered matter in the Body, and indeavour to Expell that Miſtempered matter, or to Regulate the Irregular motions, yet they work Sympathetically with the Natural and Well-ordered matter and motions, ſo that Cordials indeavour to

to Compose, Unite, and Strengthen the several Disordered, Dissevered, and VVeakned parts; and Purging Drugs indeavour to Divide and Dissolve all those Loose humors they meet with, and many times those that are Firm, Strong, and Well-tempered parts, Discomposing the whole Body, insomuch as Physicians are many times forced to give Cordials in great Evacuations, to Rectifie the Distempers, and to allay the Violent motions that the Purging Drugs have Made or Caused; and this is to be observed, that many times there be such Humors bred in the Animal body, as to be of the Nature of Purging Drugs or Medicines, which causes Fluxes, and Vomitings, and other Evacuations, and some so Violent, as to Dissolve the Nature and Life of the Body.

CHAP. LXII.

The Reason why one and the same Quantity of Purging Physick shall Purge some Bodies to Death, and not Move other Bodies, or at least not to that Degree.

THe reason one and the same Quantity of Purging Drugs or Medicines of one and the same Quality works so Differently in Several Bodies, and in one and the Same Body at Several times, is, that the Solidity, and Validity, and Facility of the Humors, as also the Quantity of Humors, in some are more than in others, and at

ſome time more than other times; but the Humors of the Body, although there be but Four, yet by their ſeveral Tempers and ſeveral Interchanging motions work Divers Effects; but I will Similize the ſeveral Humors to ſeveral Grounds or Travelling ways, and Drugs to Oxen and Horſes; For Ways, ſome are Duſty and Dry, others Stony and Hard, ſome Tough and Clammy as Clay, ſome Muddy, Miry, or Dirty, others Watery and Wet, which cauſes Labourers to Yoke more Oxen, or Harneſs more Horſes, to add more Strength, not onely when their Draughts are Heavily Loaden, but when the Ways are Ill and Uneaſie to Travel in; for in ſome Ways ten Horſes will not Draw ſo eaſily as one Horſe in other Ways, nor in the ſame Ways in Foul weather as in Fair weather, or in Winter as in Summer, but the Labourers are forced to Whip and Laſh their Beaſts to make them Draw: So in Animal bodies is Phyſick, which Pulls and Gripes the Guts, to Divide the Clammy Flegm, whereas in Sanguin bodies the Humors being Light, the Phyſick moves Faſt, and the Humors flow Eaſily, but in Dry Melancholy Bodies the Humor is ſo Hard, as the Phyſick is Foundred, like as Horſes on Stony ways which make them Weak and Tired; but in Cholerick bodies, the Humor is like Duſt that Flies about. But there muſt be ſeveral Sorts of Phyſick given to ſeveral Conſtitutions, and ſeveral Sorts of Phyſick to one and the ſame Body at ſeveral Times, as Occaſion ſerves,

ſerves, like as Husbandmen Sow ſeveral Sorts of Grains in ſeveral Grounds, and in the ſame Ground ſeveral Sorts of Grains at ſeveral Times; alſo they Sow their Grains ſeveral Manners of Ways, and Order their Grounds ſeveral Ways: the like for Humors, ſome muſt be Digg'd up with Penetrating Medicines, other Humors Plow'd up with Fomenting Medicines, others Harrowed with Extenuating Medicines, others Raked with Drawing and Attractive Medicines, and ſome muſt be VVatered with Solvable and Soaking Medicines, and all Bodies muſt be Manured with Nouriſhing Meat, as Food. Thus Men's Bodies muſt be Husbanded according to the Nature and Conſtitution of the Soil, which is the Body.

CHAP. LXIII.

Of the Agreeing and Diſagreeing of Food, as alſo of Phyſick and Cordials.

VVHen as Food is taken into the Body, wherein is Agreeable Matter and Motions, it doth help to Increaſe and Aſſiſt the Matter and Motions in the Body, helping to the Conſiſtence of the Body, as alſo for the Uſe of the Body, by which Food the Mind, or the Rational part, is alſo Increas'd; So other ſorts of Food do cauſe a Diſturbance, and many times a Deſtruction, for all the Several Parts and Degrees of Matter, and Changes of Motions, do not

not Agree, although in one and the ſame Body, inſomuch as when Diſagreeing matter and motions enter into the Body through the Senſes, or are made in the Body by Irregularities, it cauſes great Diſtempers both in Mind and Body; but ſome Food, or Subſtance, or Objects enter in, or are taken into the Body, that help to Rectifie the Inbred Diſorders, as Cordials and Medicines, whereas ſome Objects, Food, or Cordial Medicines help more the Body than the Mind, and ſome more the Mind than the Body, according as they Sympathize and Agree, either in Subſtance or in Motion; but all Liquid or Rare Subſtances work more Suddenly than the Denſe, and work more upon the Mind than the Body; the reaſon is, that all Motions, both Senſitive and Rational, are more Agil in Liquid or Rare Subſtance or Matter, than in Denſed, being more near the Nature of Animate matter, than Denſed matter is; and as Medicines and Food taken, help both the Body and Mind, as alſo ſome do Diſtemper both the Body and Mind; So do Outward Objects, as ſeveral Sights, Sounds and Touches, inſomuch as they will many times Cure a Diſeaſe, but more often Cauſe a Diſeaſe, alſo they will Compoſe a Diſtracted mind, and many times Diſtract a Compoſed mind.

CHAP.

CHAP. LXIV.

Of the Agreeing and Diſagreeing of Humors, Senſes, and Paſſions.

SOme times the Humors of the Body and the Outward Senſes Agree and Diſagree; ſometimes the Humors of the Body and the Paſſions of the Mind Agree or Diſagree; ſometimes the Paſſions of the Mind and the Outward Senſes Agree or Diſagree; and ſometimes the Senſes and the Paſſions Diſagree or Agree with the Humors of the Body; as for Example, ſometimes the Diſtempered humors in the Body make Extravagancy in the Senſes, as we ſee in Feavers; and ſometimes the Diſtempered humors of the Body make a Diſordered Mind, as we ſee thoſe that have Cholerick humors, Cholerick paſſions; Melancholy humors, Melancholy paſſions; Diſtempered humors, Extravagant Imaginations, and the like. Sometimes Extravagant Senſes make Extravagant Fancies, ſometimes a Superabundant humor makes a Strong Particular Appetite, as for Example, thoſe in the Green-ſickneſs, the Over-flowing or Increaſe of ſome Raw and Indigeſted humor will cauſe a Strong Particular Appetite, as ſome in that Diſeaſe love to Smell Strong ſmells, as Campher, Tanned Leather, Muſty Bottles, or the like, or to Delight onely in one Taſte, as Oat-meal, Coals, or Several Particular

ticular Taſtes, or Extravagant Taſtes not Natural to the Conſtitution of the Body, as to delight to Eat Coals, Leather, Candles, Cork, and millions of the like; and the Humor Increaſes, and is Nouriſhed, by the Sympathy of that Extravagant Diet; for what the Senſes take Pleaſure in, the Mind Longs for. Again, ſome Humors Antipathize, as to Hate all Loathſome Taſtes, Smells, Noiſes, Touches, and Objects. So Paſſions Sympathize with ſome Humors, and Diſagree with others; for ſome Bitter humors make Cholerick paſſions, Sharp humors make Spitefull paſſions, Tough humors make a Dull underſtanding, Melancholy humors make Timoroſity, Cholerick humors make Courage, and many the like; then the Senſes and the Mind Agree and Diſagree often, as ſome Objects will Aſtoniſh the Senſes, and Raviſh the Mind, Delight the Senſes, and cauſe Love in the Mind; others which the Senſes Diſlike, cauſe Hate in the Mind, Pain in the Senſes, Grieving in the Mind, Pleaſure in the Senſes, Delight in the Mind; but if the Senſes and Mind diſagree, then the Senſes Like that, the Mind Hates; as for Example, the Senſe is taking Pleaſure upon an Object, which for the Croſs diſpoſition, the Mind Hates, or for ſome Injury done, or by ſome Neglect, or out of Envy; and as they Sympathize and Antipathize in their Working and Making, ſo in the Expulſions, Time works out a Paſſion, Accidents work out Paſſion, Evacuations work out Paſſion, the like in the Senſes,

ſo

ſo many times Humors are Expulſed by Paſſions, and as the Superfluities are Purged out of the Body, after the ſame manner are Violent Paſſions from the Mind, for as the Body Purges by Siege, by Vomit, by Urine, by Spitting, by Sweating, by Bleeding, by Inciſions, and the like, ſo ſtrong Paſſions are Purged by Weeping, by Sighing, Groaning, Speaking, and Acting; but if the Increaſing motions of the Humors in the Body, and the Paſſions in the Mind, be as Many, and as Strong as the Expulſive motions, then there is a Continuance of the ſame Humor or Paſſion, for whatſoever is Caſt forth, or Waſted, is Bred again.

CHAP. LXV.

Of Outward Objects Diſagreeing with the Natural Motions and Humors in the Body.

INward Commotions of the Body are often times cauſed by Outward Objects, as when the Senſes take a delight in ſome kind of Sound, Sent, Sight, Taſte, and Touch; as for Example, ſome will Swoon at a Fearfull noiſe, that is, at a Sudden or Unaccuſtomed or Tumultuous noiſe; others will Swoon at the Sight of Blood, or at any Cruel object, or at the Sight of a Cat, or many other Creatures; ſome will Swoon at Sweet Smells; others, if they ſhould Taſte Cheeſe, or any Meat they diſlike Naturally; and

ſome will not only Swoon, but Dye Laughing with Tickling; the reaſon is, that the Exterior motion Antipathizes with the Natural motion belonging to the Body, ſometimes only to the Senſitive parts, ſometimes to the Rational part, ſometimes to both. The reaſon is, that the Diſordered motions of the Outward ſenſes Diſorder the Interior motions, which makes the Body Sick, and the Mind Paſſionate, and ſometimes the Brain Frantick; and if they make not the Body Sick, nor the Brain Mad, yet thoſe Antipathetical, and theſe Diſordered motions never Fail to put the Senſe to Pain, or move Paſſion; but when theſe Antipathetical motions be too Strong for the Natural motions, belonging to the Body or Mind, it brings Death or Unrecoverable Madneſs; for then the Natural motions, belonging to that Body, are as it were Extinguiſhed; Thus we may ſee, that the Outward ſenſes may be Perfect, and the Inward parts within that Body may be Corrupt and Decayed: So likewiſe the Outward ſenſes may be Infected, and the Inward parts Sound, and ſo ſome Parts of the Body Firm, and others Infirm, and ſome of the Outward parts or Senſes Wanting, or Defective, others Free, Clear, and Diſtinguiſhing. The reaſon is, that ſome of the Senſitive Animate matter works Orderly, others Diſorderly, and contrary to the Nature of the Body; for as I have ſaid before, ſome of the Exterior parts of the Body may be Numb'd or Dead; the reaſon is, that the Natu-

ral

ral motions, belonging to ſuch a Part of the Body, are Altered, for every Part or Parcel hath Proper motions belonging thereunto. But if in any Part of the Body the Natural motions onely work Irregularly, then it onely cauſeth a Pain in that Part; but if the Motions work Croſs to the Nature of the Body, it cauſeth that Part to Die; but if they Alter but in Part, it cauſes onely a Numneſs, which is a Degree of being Dead; but if the Natural motions be onely Stopt by ſome Outward Accident or Actions, as by a Sudden Fright, which cauſes the Body to Swoon, by reaſon the Spirits are Contracted by the Fright into ſo Straight a Compaſs, and Thronged ſo Cloſe together, that they cannot Move in Order, or by the Action of Lying or Preſſing too Hard or too Heavy upon any Part, that Hinders the Spirits therein from Moving after there Natural manner, which cauſeth a Sleepineſs or Numneſs in thoſe Parts, that are Preſt by Weight or Strength; thoſe Diſorders are ſoon to be Rectifi'd, as by giving Liberty, or helping the Spirits with Cordials, which give Strength to them, and ſet them at Liberty; but if the Senſitive parts be quite Altered from their Natural courſe, they ſeldome are Rectifi'd; but ſometimes the Aſſiſtance of the Regular motions in the Body joyning as it were with one Conſent, do Expel that Animate matter out of that Part wherein they work, contrary to the Nature of the Body, and Supplies that Part with Freſh and New matter, that

Moves as it ſhould do. Likewiſe as the Senſitive Animate matter Works in ſome Parts of the Body Irregularly, and in other Parts Regularly, and in one and the Same Part ſometimes Regularly and ſometimes Irregularly, ſo it is many times with the Rational Animate matter, for ſometimes that will Move Regularly, and ſometimes Irregularly, that makes Frantick-men ſometimes to be In their Wits, and ſometimes Out of their Wits; but if their Madneſs be at certain times, as at Full of the Moon, or High Tides, or Springs, or Falls, or in the Midſt of the Summer; or when they keep an Evil or too Full a Diet, then it proceeds from thoſe Outward accidents, which give Aſſiſtance to the Diſordered motions, which Inhabit in the Body, the Original defect being in the Senſitive Animate matter; for this ſhews, that the Madneſs proceeds from ſome Diſtemper of the Body, which moſt commonly is in the Splene, or that which they call in Women the Mother, from which Parts ariſe Groſs and Noiſome Vapors, which Aſcend up into the Head, and Diſaffect the Brain, and many times the Brain is Diſaffected with its owns Diſtempers, and whenſoever the Brain is Diſtempered, the Rational Animate matter which moves therein, moves Irregularly; but when thoſe Times or Seaſons are paſt, or that Over-fulneſs of Humor is Purged out, the Natural motions of Humor get Strength, and the Man is Well until the Return thereof. But if the Irregularity be

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in the Rational Animate matter, it is most Dangerous, for it seldom or never is Cured, nor seldom hath Intermitting Fits, but as a Continual Feaver in the Body, so is a Continual Madness in the Mind. But I shall speak more of this in my following Chapters.

CHAP. LXVI.

Of the Inward and Outward Senses, and Parts of the Body.

SOme of the Exterior Senses may be Extinguished, as Sight, Hearing, Sent, or Taste, or some Parts of the Body Numb or Dead, or some Disjointed from the rest, as Legs, or Arms, Toes, Breast, Eyes, Nose, or the like, and yet the Material parts Sound and Whole, which Material parts are the Vital parts, as the Brain, the Heart, the Liver, the Lights, the Splene, the Maw, the Midriff, the Kidneys, the Bladder, or the like; as for the Heart, and the Brain, there is such a Sympathising and Conjunction with the whole Body, as the least Distemper Indangers the Body, and the least Alteration of their Shapes or Figures Destroys the Life of the Body, but for the rest of those Vitals, or Fundamental parts, when they Decay, or are any way Impaired, the Life doth sink down, as it were by Degrees, according as those Parts Impair; but if they be Wounded, or Corrupted by Poisons, or Plaguy Infections, or by

by an Absolute and Sudden Alteration from their Natural motions or Figures, then the Life is suddenly Extinguished, but the External figures of the rest of the Parts have not such a Sympathy to the Interior motions of the whole Figure; but when I say, the Exterior figure of the Interior parts, I mean, the Particular figure of every Particular part, not onely the Outward part, as Hands, and Arms, Legs, and Head, and Body, and the like, but of Brain, and Heart, and Liver, and so all the rest; for though they be Internal figures to the External figures, yet they be the External figures to the Internal motion that works in them.

CHAP. LXVII.

The Sympathies and Antipathies of Sound to the Mind and Actions.

THe Bottom hole in the Ear is covered with a Thin Cawl or Felm, which is called the Drum of the Ear, where these Motions that Enter in at the Ear, Beat thereon, like unto Drum-sticks, and if the Felm, or Thin Skin, be Stretched Smooth, or Braced Straight with the Nervous Strings, the Sound is Clear and Loud, but if it be Weakly Braced, and the Nervous Strings Loose, and the Thin Skin Slack, the Sound is Low and Dull, by reason that Skin is so Soft by the Slackness, that the Bearing, or Striking, or Playing motion thereon

on cannot Rebound or Retort, but Sinks, and is Smothered therein; and if it be Stretched very Hard and Thin, then such Motions enter the Ear, which Peirce or Cut sharp, such as we call Shril Sounds, it doth not only Disturb the Natural motion in the Brain, but many times Breaks that Skin, or at least puts it to Pain; Likewise, if those Motions, that Enter in at the Ear, move Cross to the Natural motions in the Brain, it causeth Pain in the Head; Likewise, if the same Notes are often Repeated, it Fills the Head so full of this Particular motion, as they Over-power the Natural motions therein, and as I may say, causeth a Surfeit thereof in the Brain, being Glutted therewith, Tyring not only the Sensitive part of the Brain, which causes Pain or Diseases, but Oppressing the Rational part of Animate matter in the Brain, causing a Hate thereto; and if the Vocal or Verbal Sound is Crossed, as by the way of Antipathy, it may Disorder both the Sensitive and Rational Animate matter in the Brain, so much, by Striking or Pressing in, and by Barring and Thronging out, as the Sense and Reason are so Disordered, that the Natural Government is absolutely Overthrown, from whence proceeds Madness, at least Extravagant Passions raised from the Heart; the like Disorder both in the Head and Heart, may proceed from each of the Senses; and as these or the like External Objects may Disorder by the Irregular and Antipathetical motions, the Health and Understanding, which

are

are the Interior motions, ſo Regularity and Sympathy of the Verbal or Vocal motions brought through the Ear, may Compoſe the Differences and Diſorder of the Natural Interior motions, as Health, Reaſon, Underſtanding, Affection, or Reconcilement; as for Example, a Timely, Kind, Diſcreet diſcourſe may Compoſe a Diſquiet mind; for the Motions of Wiſe, Sober, Kind, Gentle or Eloquent words may turn the Motion of Troubled or Extravagant thoughts into a Smooth and Calm temper, or Regular order; Likewiſe Unkind, and Indiſcreet, Double, Falſe, Malicious, Haſty, Sudden, Sad, or Frightfull diſcourſes, may Diſcompoſe and Diſorder a Quiet and Well-tempered mind, Diſordering the Regular motions, by Miſ-placing the Thoughts, making a War in the Mind, giving Strength to ſome Thoughts, and Overpowering others: The like with Vocal Sounds. As for Muſick, the Notes in Muſick agree with the Motions of Paſſions, and the Motions of ſeveral Thoughts, as ſome Notes Sympathize with Paſſions, and with the ſeveral Thoughts, and Move the Actions accordingly, ſo others Diſcompoſe the Mind, and Imbitter, and Diſturb it; for Slow, Soft ſtrains on the Tenor and Baſs, are as Commending, Extolling, Exciting, Threatning, Terrifying, Judging, which moves the Mind to Melancholy, from whence proceeds Fear, Superſtition, Devotion, Repenting, Praying, and Vowing, which cauſes an Humble Submiſſion, Dejected Countenance,

Weeping

Weeping Eyes, Heaved up Hands, and Bended Knees: and Slow Soft Notes, only on the Tenors, are a Sad Relation, Sorrowfull Laments, Mournfull Complaints, Pleadings, Petitioning, Acknowledging Faults, Begging Pardon, Imploring Mercy, which moves the Mind to a Tender Pitty and Compassion, and a Charitable Love, from whence proceeds a Listning Ear, a Helping Hand, a Serious Countenance, a Sad Eye, with a Favouring Cast therefrom. High, Hard, Sharp Notes or Strains on the Bass or Tenor, is like Exclaming, Incouraging, or Animating, Extolling, Promising, which moves the Mind to Pride, Ambition, Vain-glory, Desire, Hope, which makes the Body Active, the Actions Adventurous, Bold, the Eyes Darting and Quick. Low, Sharp Strains, and Cross Notes, and Unequal Times, move the Mind to Murmuring Words, Choler, Hate, Revenge, Fury, Despair, and Cursing, the Hands Tearing, the Leggs Stamping, their Bodies Turning several ways, their Countenance Amazed and Gastly, and the Eyes Staring. But Quick, Sharp Strains in Tenor Notes, and Soft Slow Strains on Treble Notes, are as Perswading, Flattering, Insinuating, Professing, Inviting, Alluring; this moves the Mind to Love, the Thoughts to be Amorous; this makes their Actions Affective, Kissing their Hands, Making of Leggs, Composing their Garments, Offering their Service, their Words Complemental, their Countenance Smiling, and their Eyes Glancing: and Quick,

Sharp Strains on the Tenor and Treble Notes, produce a Cheerfull Mind, they make the Thoughts Lively, the Countenance Pleasant, their Eyes Quick, their Discourse Wanton and Jesting, their Actions Laughing, Singing, Playing, and Dancing. But Slow, Low, Flats on the Basses and Tenor, move the Mind to a Dull Stupidity, wherein the Thoughts lie as Dead; this makes the Body appear like Senseless Statues of Stone without Motion, the Head bending Down, the Eyes fix'd to the Ground. But Chromatick Musick is like School Disputation, and Discord in Musick is like Quarrelling. These are the Grounds of Musick. Musick hath a Sympathy to the Rational motions, because the Rational Spirits move in Number and Measure, as Musical Instruments do. Thus as Notes are Set, the Thoughts are Placed, and as the Notes Change in several Tunes, so the Thoughts Move in several Passions, and as Notes are Composed, so are Thoughts, in Crotchets, Quavers, Semibriefs, &c. a Full Note is a Fixed Thought. Thus according as the Notes and Thoughts Agree, the Mind and Musick makes an Harmony. If I have not matched my Strains and Notes, with Words and Thoughts properly, let those that Understand Musick and Rhetorick mend it, for I Understand neither, having neither Fed at the Full Table, nor Drunk at the Full Head of Learning, but Lived always upon Scattered Crums, which I Pick up Here and There, and like a Poor Lasie Beggar, that had

had rather Feed on Scraps, than Work or be Industrious to get Wealth, so I had rather Write by Guess, than take the Pains to Learn every Nice Distinction. And if my Book will not Please the Learned, yet it may Please the Vulgar, whose Capacity can onely Dig in the Earth, being not able to Reach the Celestial Orbs by Speculation.

CHAP. LXVIII.

The Knowledge of Diseases.

IT is not sufficient for Physicians to Study the Names of Diseases, and to know onely so much, as to Distinguish one Kind of Disease from another, as we should Distinguish Man from Beast, or so as a Horse from a Cow, or as that Horse is a Barb, or a Courser, or a Gennet, or a Turk, or an Arabian; but that this Barb is not that Barb, or this Gennet is not that Gennet, and the like. Likewise to know the Nature so, as to know how to Use it, and what's fit to Apply to it; as for Example, a Man buies a Horse, and he having onely an Old Saddle, that he was accustomed to Ride with on a Horse he formerly had, puts it on his New Horses back, yet although his Horse is of the same Country, or Sort of Horses, as his former Horse was, yet the Saddle may not be Fit for the New Horse, but may be either too Big or too Little, and by the Unfitness may Gall his Horse so sore, and

Corrupt the Fleſh ſo much, as he may be a Scald back'd Jade, as long as he lives, if it Feſters not as to kill him; So in Diſeaſes, Medicines may be too Strong or too Weak, or they may Evacuate too Much or too Little, if they do not know the juſt Dimenſion and Extenſion of the Diſeaſe. Again, one of the ſame Sort of Horſes may be ſo Dull, as hardly to move out of his Pace with the Spur, although it ſhould Prick ſo Deep, as to make his Sides to Bleed, when another Horſe of the ſame Sort ſhall Run over Hedge and Ditch, againſt Trees and Stones, until he Hurt himſelf, and Fling his Rider, or at leaſt it Flings, and Leaps, and Snorts, and Stamps, and grows into a Furious heat; So Diſeaſes, ſome muſt be Handled Gently, others more Roughly, for in Diſeaſes you muſt learn the Diſpoſition of the Diſeaſe, as of what Kind, Sort, or Breed it is. So likewiſe it is not enough for a Phyſician to Know what Drugs will Purge Choler, what Flegm, and what Melancholy, or the like, but they ſhould Study to know the ſeveral Motions, which work in them, or elſe their Operations will be as their Imployments are, which is Chancemedly; for otherwiſe a Phyſician neither Applies his Medicines Knowingly nor Skilfully, but Cuſtomarily, becauſe they are uſually given in ſuch Diſeaſes, whereof ſome do Mend, others do Die with them; but certainly, if Phyſicians would take Pains to Study the ſeveral Motions of the Diſeaſes, and alſo the Drugs and Medicines

Medicines they give, and would do as Skilful Muſicians, which make a Conſort, where, although every one Plays upon a Several Inſtrument, yet they all make their Notes Agree, there would follow an Harmony of Health in the Body, as well as a Harmony of Muſick in theſe Conſorts. But, as I ſaid before, it is not ſufficient to know, how to Purge Choler, Flegm, Melancholy, and the like, for the Purging of thoſe Humors doth not always work Cures; for ſome Diſeaſes do not always proceed ſo much from the Looſe Humors in the Body, as the Diſordered motions in the Body; for Choler, Flegm, Melancholy are not Superfluous humors of the Body, unleſs the Quantity of Each be too Much for the Nature of the Body, for thoſe Humors are part of the Body, and the Body could not Subſiſt without them, for they are ſeveral Mixtures, which ſerve to the Conſiſtence of the Figure, and as ſome Motions Make and Mix ſuch Humors, ſo other Motions carry the Humors like Tempered matter, or Lime, to the Creations or Reparations of the Figure, which is the Body, and if there were none of thoſe Humors, the Figure would no more Stand if once a Decaying, than a Houſe, which runs to Ruine for want of Stone, Brick, Wood, or Mortar, or the like; beſides, if there were not Flegm, Choler would do like a Coach-Wheel for want of Moiſture, the Motions would ſet the Body on Fire, and if no Choler, the Flegm would Drown it, and if neither

Flegm

Flegm nor Choler, Muddy Melancholy would Dam or Stop it up. But Phyſicians ſhould Study Diſeaſes ſo, as they may be able to Diſtinguiſh them, as we do the Different Faces of Mankind, or any other; for there are as many Several Kinds of Diſeaſes as there are Animals, and as much Difference in one and the ſame Kind, as there are in the Several Shapes, and Countenances in Bodies, and Diſpoſitions in Minds; beſides, Diſeaſes are like Parents and Children, as the Children may Reſemble the Parents, or the Children of the ſame Parents may Reſemble one another, and yet they are not all one; Again, Diſeaſes may be like Half-brothers or Siſters, as ſome may have all one Mother, but not one Father: ſo ſome Diſeaſes may be produced partly from ſuch a Cauſe, and partly from Another. Again, Diſeaſes may be Match'd, and ſome be like Widows, and Widows that Marry again, ſo Diſeaſes may be Looſe, or be quit of ſuch a Producing Cauſe, and Joyn with Another; as for Example, a Cold Stomach is a Diſeaſe, and a Hot Liver is a Diſeaſe, and both may Produce other Diſeaſes, perchance the Cold Stomach may be Cured, but not the Hot Liver, when the Cold Stomach is Cured, the Hot Liver is a Widow, which afterwards may chance to Match with a Cold Melancholy Splene, or two or three, or more Diſeaſes may be Match'd together, as if a Man ſhould have two or three Wives, or a Woman as many Husbands; likewiſe, Several Accidents may

may be Matched, or at least Commit Adultery, and get Bastardly Children; as for Example, a Great Heat may be Matched or Joyned with a Sudden Cold, which may produce a Great Feaver, or other Diseases that usually Follow, and millions of the like Examples may be given. But, I desire my Readers, that they may not Condemn my Comparisons, as Extravagant and too Fantastical for so Grave a Subject, for I could find no Fitter to Express my Meaning; I would have Physicians as Skilfull, Knowing, and Learned in Diseases, as they are in the Customs, Manners, Humors and Persons of Men; and that they may as Knowingly distinguish the Difference, Alterations, Degrees and Alliances of Diseases, as they do the several Sexes, Faces, Countenances, Dispositions and Qualities of Men. Besides, who knows but that the very Thoughts of Men may be known by the Temper of their Bodies? for could Men come but to Learn the several Motions of the Body, which Ingenious Observations may come to do, they may easily come to Learn the Motions of the Mind, and so come to Know the Thoughts, which Thoughts are the several Figures therein, which Figures most commonly move Sympathetically with the Motions of the Body.

CHAP.

CHAP. LXIX.

Of Diſeaſes in General.

AS for Diſeaſes, they are Innumerous, and ſo Various, as no Diſeaſes are juſt Alike, but there is ſome Difference; for though the ſeveral Sorts of Diſeaſes are of One and the ſame Kind, yet every Particular hath ſome little Difference; So that Particular Diſeaſed Perſons, although they are Diſeaſed with one and the ſame Kind or Sort of Diſeaſes, yet the ſame Kind or Sort of Diſeaſes moves not juſt Alike in ſeveral Bodies, like as Madneſs, although a Bedlam be Full of thoſe Diſtempered men, which are named Mad men, all having one Diſtemper of Madneſs, yet they are not all Mad after One manner or way, neither is their Degree of Madneſs Equal; The like for all Diſeaſes of the Body. Alſo it is to be obſerved, that many ſeveral Diſeaſes may be produced from Divers Cauſes, ſo many ſeveral Diſeaſes may be produced from One Cauſe, and but One Diſeaſe from One Cauſe; Alſo One and the ſame Kind or Sort of a Diſeaſe, may proceed from the Several and Different parts of the Body, as from the Stomach, Lungs, Liver, Splene, Head and Heart; alſo One and the ſame Kind or Sort of Diſeaſes, may be produced from the Several and Different humors in the Body, as from Flegm, Choler, Melancholy, or Blood; alſo Exterior

terior Distempers may cause Interior distempers; thus Particular Diseases may be Variously Produced, and Various or Several Diseases Particularly Produced; also Outward distempers may Joyn with Inward Distempers. But all Cold diseases are more easily Cured than Hot, if there be Timely Remedies Applied to them, before such time they be Crystallined, that is very Hard, Densed or Congeal'd; but most Cold diseases, which are made by Cold motions, make the Several Parts of the Body, or Several Humors in the Body, like as when Frost that alters the Outward Form of Raw Flesh, or Rare, or Liquid Substances, which doth not alter them so, as to Change the Inward Nature, but onely the Outward Form or Appearance; but all Cold diseases are made either by Cold contractions, or Cold dilatations: as for Cold contractions, they cause those Parts of the Body, or Humors in the Body, to be as if they were Frozen or Congealed like Ice, which causes those Parts or Humors to be more Dense than Naturally they should be, which causes the Body to be Numb and Unactive, and Cold dilatations cause those Parts and Humors in the Body to be more Rare and Loose than by Nature they should be, which causes the Body to be Weak, wanting that Consistence that should give it Strength; But in those Diseases Hot Remedies Cure them;, but in Hot Diseases, those Parts of the Body, or Humors in the Body that have Supernatural Hot motions,

cauſe the Parts of the Body to be as Burnt, Scorch'd, or Dri'd, and the Humor to be more Agil, and Sharp, and Stormy, like a Tempeſt at Sea; but it is more facil to Thaw a Piece of Ice, than to Quench a Houſe on Fire: So it is more facil to Cure Cold diſeaſes, that are not Cryſtallin'd, than Hot diſeaſes, that Burn. But, to conclude this Chapter, Diſeaſes are made by all Sorts of Irregular motions and Diſtempered matter, and ſome cauſed by Exterior Diſtempers and Irregularities, and ſome by Interior, and ſome by both.

CHAP. LXX.

The Reaſon why Animals are Hot, whilſt they Live, and Cold when Dead.

THe Exterior and Interior Heat of ſome Living Animals is as Proper to the Nature of their Figure, as an Interior and Exterior Cold is to Freſh Water, or Quick-ſilver, or ſome Sorts of Plants, as Poppy, Night-ſhade, and many others; But when the Animal is Changed from being an Animal, as by that, we call Death, thoſe Properties of Natural heat, made by ſuch Motions and Matter as make an Animal, are Altered, by Moving and Working to ſome other Figure, that is not an Animal, ſo as that which is named Natural heat, is Changed with thoſe Natural motions, Properly belonging to an Animal figure, for the Animal

figure

figure and Animal heat do alter together. This is the reaſon, that when an Animal is that, which we name Dead, it ſeems to our Senſes to be Stiff, Cold and Pale, like Earth, Stone, or the like; but when the Animal body is Diſſolved, it ſeemeth to our Senſes both of another Colour, Touch, and Form. But this is to be obſerved, that all Living Animals have not Exterior nor Interior heat in the like Degree, for ſome Sorts of Animals, as Fiſh, have neither ſuch Interior nor Exterior heat as Fleſh Animals have, for a Fiſh is Exteriouſly cold, and hath very little Interiour heat, and a Camelion is extremely Cold, both Interiouſly and Exteriouſly, and many other Creatures may ſerve for Examples. Likewiſe ſome Vegetables are ſo extremely Cold, both Exteriouſly and Interiouſly, as they will not Thrive in the Sun, as that, we call Night-ſhade. Wherefore, it is not Heat, that is the only Cauſe of Life, Health, or Nouriſhment, nor the Want of that Heat, that cauſeth Diſſolutions, which we call Decay, and Death, but the Animate matter working ſuch or ſuch Effects, and making ſeveral Creatures, with ſeveral Conſtitutions, Temperaments, Nouriſhment, Conſiſtence, Decays, and Diſſolutions.

CHAP. LXXI.

A Concluſion of this Part, of Diſeaſes.

THere are amongſt Animal Creatures, Diſeaſes of Divers Kinds, and Divers Sorts, and Differences in one and the Same Sort, and ſome Curable, and ſome Incurable; but if any of the Vital parts be Periſhed, there is no Remedy, for there is not any Means or Ways, as Medicine, Cordials, Diets, Evacuations or Reſtoratives, that can make thoſe Parts, that are Decayed or Periſhed, Perfect or Sound again, for Nature her Self cannot Do or Effect it without a New Creation.

CHAP. LXXII.

The Deitical Centre.

ALthough Infinite matter and motion was from all Eternity, yet that Infinite Moving matter is Diſpoſed by an Infinite Deity, which hath Power to Order that Moving matter, as that Deity pleaſeth, by reaſon there is nothing Greater than it Self, therefore there is nothing that can Oppoſe its Will. Likewiſe, this Deity is as the Centre of Infinite Moving matter, for though there can be no Centre in Infinite, by reaſon there is no Circumference, yet in reſpect

ſpect the Matter is Infinite every Way from and to this Deity, we may ſay the Deity is the Centre of Infinite matter, and by reaſon the Infinite Moving matter Flows as much To this Deitical Centre, as From it, it doth as it were Preſent it Self, or rather is Forced to be Ordered by its Infinite Wiſdome, otherwiſe it would Run into an Infinite Confuſion, with which there would be an Infinite, Horrid, and Eternal War in Nature; and though this Deity is as the Centre to Infinite matter, yet this Deity in it Self is as Infinite matter, for its Wiſdome is as Infinite as Matter, and its Knowledge as Infinite as its Wiſdome, and its Power as Infinite as both, and the Effects of theſe Attributes run with Infinite matter like Infinite Parallel Lines, Even and Straight, not Croſſing nor Obſtructing, nor can they Circumference or Circle in each other, the Matter and the Deity being both Infinite; neither is the Matter or Deity Finite to or in themſelves, for Infinite matter hath no End or Period; neither can the Infinite Deity Comprehend it Self, ſo as it is a God to it Self, as Well or as Much, as to Matter, for this Deity is no ways Finite, neither to it Self nor Matter, its Knowledge being as Infinite as its Power, and its Wiſdome as infinite as its Knowledge, and its Power as Infinite as both, and being Infinite, its Wiſdome cannot be above its Power, nor its Power beyond its Wiſdome, neither can its Knowledge Comprehend its Power, or the ways of its Wiſdome, being all

In-

Infinite and Eternal. And though Nature is Infinite Matter, Motion and Figure, Creating all things out of it Self, for of Matter they are Made, and by Motion they are Formed into ſeveral and particular Figures, yet this Deity Orders and Diſpoſes of all Nature's Works.

GReat God, from Thee all Infinites do Flow,
And by thy Power from thence Effects do Grow;
Thou Order'ſt all Degrees of Matter, juſt
As 'tis thy Will and Pleaſure, Move it muſt,
And by thy Knowledge Order'ſt all for th' beſt,
And in thy Knowledge doth thy Wiſdom reſt;
And Wiſdom cannot Order things amiſs,
For where Diſorder, there no Wiſdom is.
Beſides, Great God, thy Will is juſt, for why?
Thy Will ſtill on thy Wiſdom doth rely.
O Pardon, Lord, for what I now here Speak
Upon a Gueſs, my Knowledge is but Weak:
But thou haſt made ſuch Creatures as Mankind,
And Gav'ſt them ſomething, which we call a Mind,
Always in Motion, it ne'r Quiet lies,
Untill the Figure of his Body dies;
His ſev'ral Thoughts, which ſev'ral Motions are,
Do Raiſe up Love, Hope, Joys, and Doubts and Fear;
As Love doth Raiſe up Hope, ſo Fear doth Doubt,
Which makes him ſeek, to find the Great God out.

Self-

Self-love doth make him Seek to find, if he
Came from, or ſhall Laſt to Eternity;
But Motion being Slow, makes Knowledge
Weak,
And then his Thoughts 'gainſt Ignorance do beat,
As Fluid Waters 'gainſt Hard Rocks do Flow,
Break their Soft Streams, and ſo they Backward
go:
Juſt ſo do Thoughts, and then they Backward
Slide,
Unto the Place, where firſt they did Abide,
And there in gentle Murmurs do Complain,
That all their Care and Labour is in Vain:
But ſince none Knows the Great Creator, muſt
Man ſeek no more, but in his Greatneſs Truſt.

To

To my Juſt

READERS.

I Deſire all thoſe, that are Friends to my Book, if not to my Book, for Juſtice ſake, to believe, that whatſoever is New, is my Own, which I hope All is; for I had never any Guide to Direct me, nor Intelligence from any Authors, to Advertiſe me, but Writ according to my own Natural Cogitations, where, if any do Write after the ſame Manner, in what Language ſoever, that they will Remember my Work is the Original of their Diſcourſe; but they that Steal out my Opinions, or Compare them to Old Opinions, that are nothing alike, as if one ſhould Liken two Men, that had neither Semblance in Features, Countenance, Proportion nor Complexion, becauſe they are Two Men, as being of Mankind, ſurely they might be Judged to be Fools: But may all ſuch be condemned as Falſe, Malitious, Ridiculous, or Mad. But to ſuch Noble Diſpoſitions, as will Give Right, and Speak Truth, may they never Receive Injury, may Honor Crown them, Fame Applaud them, and Time Reward them with Antiquity.

Of

OF all my Works, this Work which I have (Writ,
My Best Belov'd and Greatest Favorite,
I look upon it with a Pleasing Eye,
I Pleasure take in its Sweet Company;
I Entertain it with a Grave Respect,
And with my Pen am ready to Protect
The Life and Safety of it 'gainst all those,
That will Oppose it, or Profess it Foes:
But I am sure, there's none Condemn it can,
Unless some Foolish and Unlearned Man,
That hath no Understanding, Judgment, Wit,
For to perceive the Reason that's in it.

I Find, since I have Read my Book over, I could have Inlarged that Part of my Book, that Treats of Diseases, much to the Advantage; but I must Intreat my Noble Readers to Remember, there are Natural Humors, and Metamorphosed Humors, which are wrought by Several motions, as those of Elements; also that there are Natural Contractions, Attractions, Retentions, Digestions, Dilatations, Expulsions; likewise that there are Unnatural of all these Motions; that is such, as are Proper or Improper to the Natural Health, or Consistence of the Several Parts, and the Generality of the whole Figure; also that the Motions that make the Humor, and the Motions that move the Humor, may be quite Different, and some

Parts of a Humor may be made by ſome Sorts of Motions, and ſome by other Sorts of Motions, where my Diſcourſe of the Motions, which make the Elements, will Inlighten the Readers.

HIS

HIS

EXCELLENCY

The Lord Marquis of

NEVVCASTLE

His Opinion concerning the Ground of

NATURAL PHILOSOPHY.

SINCE now it is A-la-mode to Write of Natural Philoſophy, and I know, no body Knows what is the Cauſe of any thing, and ſince they are all but Gueſſers, not Knowing, it gives every Man room to Think what he liſts, and ſo I mean to Set up for my ſelf, and Play at this Philoſophical Game as follows, without Patching or Stealing from any Body.

They talk that Motion doth every thing, I grant it, but this Motion muſt be from Something; They ſay, This Motion and Spirit was put in at the Creation of the World, I believe it, but ſtill we are to ſeek what is the Cauſe of this Motion; Why then, thus for my Opinion,

That *Salt is the Life that giveth the Motion to all things in the World.*

Make a Trench in a Garden, and fill it with Manure, and ſo Plant all manner of Herbs in it, and you ſhall have More and Better, than if you did not ſo, and this is Salt and Spirit of Salt, that doth Diffuſe and Infuſe it ſelf into the Motion of every Kind.

Again, Graft on a Crab-tree a Hundred Several Fruits, lay Manure or Dung at the Root of it, and you ſhall have More Fruit and Fairer, and this is Salt in the Manure; and the Spirit of this Salt is ſo Thin, Peircing, and ſo Convertible, as it preſently Turns into the Several Motions of all theſe Several Fruits, or elſe how could it be, being but One thing at the Root of the Tree, that it ſhould Nouriſh ſo many Several Fruits, did it not Convert it ſelf into all the Several Kinds of Motion in theſe Several Fruits? And this is Salt and the Spirit of Salt

Then for Husbandry, take all manner of Manure, Horſe-dung, Cow-dung, Pigeons-dung, Lime, Chalk, Marl, Burnt Rags, Burnt Earth, Aſhes, Stale, lay this upon Ground, and how Fruitful doth it make it, for all manner of Grain and Corn? and all this is but Salt and the Spirit of Salt.

Now we muſt conſider, that Salt is Fire, every Body Feeleth how Hot Dung is, and every Body Sees what a Heat comes from it by the Smoak, which ſhews it to be that we call Fire, which is a Great Heat; now few Motions but

are

are made by Heat, and this is the Life of the World, and makes Motion, for without this it is Dead, *Terra Damnata*, and all this is but Salt and the Spirit of Salt.

Some ſay, Wind makes Motion, Wind is Thick Air, and I conceive, all Air is but a Thin Salt, a Salt-petre. Dr. *Payn* was a Good Philoſopher, and a Witty Man, and he ſaid, that he was of my Opinion that all Air was but a Thin Salt.

Again, Ice is made of Salt, for who knows not, that put Snow and Salt in a Pot and ſtir it by the Fire, and it becomes Ice? this is Salt.

The World is nothing but Salt, and that Salt is the Ground of every thing, Life and Motion.

The Chymiſts ſay well, that the World is made of Salt, Sulphur, and Mercury, but in Vegetables they take the Oily part to be Sulphur, which is not Brimſtone, and the Watery part to be Mercury, which is not Quick-ſilver, but Salt they find plainly Salt.

All Animals, Vegetables, and Minerals, have all their Being from Salt, Man's Excrements, Salt; Man's Urine, Salt; Man's Blood, Salt; and there is no Doubt, but that, which is Life and Motion in Man, is his Heart, and there is the Fire, and ſo the Heart certainly is the Receptacle of Salt. For Vegetables, I have proved ſufficiently all their Production to be by Manure, which is Salt and the Spirit of Salt. Now for Minerals, there is no Chymiſt, but can

draw

draw you Salt out of any Mineral, and that which they ſubſiſt moſt of is Salt. And all things either Alive or Dead, or any thing that is a Subſtance, Chymiſts can ſtill get Salt out of them; Therefore all is Salt, which is the Life of all things. Now there is Volatile Salt and Fixed Salt, that is, the Volatile flies away, and the Fixed Salt remains, but I am confident a greater Fire, as a Furnace, would turn all your Fix'd Salt to be Volatile.

For the Sea, every one Confeſſes and Knows, there is a great deal of Salt in it, and that makes it look Green as Graſs, as Trees, and the like; and I am confident, that this Salt in the Sea is the cauſe of the Ebbing and Flowing, and not the Moon; The Motion of the Ebbing and Flowing, as my Wife ſays, is ſo Rational, as truly I believe it, and is thus: When it Flows it is a Half circle, and Convex, where it Flows, one Wave overtaking another, before, and Concave behind, and when there is no more Force of Water left behind to Thruſt it forward, then all the Weight being Before, and nothing Behind, then that Weight Preſſes it back again, and then the Half circle is altered, for what was Convex before is now Concave, and what was Concave is now Convex in this Retrait; but as it Flows to us, it Ebbs in ſome other Place, and as it Ebbs to us, it Flows in ſome other Place, ſo that it keeps the Figure ſtill, where it Flows, and where it Ebbs, that is, where it Flows it is Convex, and where it Ebbs it is Concave, and this is Rational enough.

Now

Now for the Sun, what that is, I may Gueſs as well as any, ſince no body tells what it is, onely *Kepler* ſays, it is the Hardeſt Body in the World, Inflamed, and I believe that, but he doth not tell what Stuff it is made of; Other New Philoſophers will have it a Flame, and nothing elſe, which is Impoſſible, for there is no Flame but hath ſomething to Maintain it, or elſe it muſt go out; no Flame of a Candle but hath a Wick and Tallow to Maintain it; no Lamp, but hath a Wick and Oil to maintain it; no Fire, the greateſt Flame, but hath Fuel to Maintain it; The Sun, no doubt, is a great Fire, and muſt have ſomething to Maintain it; But before I deliver my Opinion to you, I deſire leave to make you a little Relation, and it is this: Dr. *Payn*, a Divine, and my Chaplain, who had a very Witty Searching Brain of his own, being at my Houſe at *Bolſover*, lock'd up with me in a Chamber, to make *Lapis Prunellæ*, which is Salt-petre and Brimſtone Inflamed, looking at it a while, I ſaid, Mark it, Mr. *Payn*, the Flame is Pale, like the Sun, and hath a Violent Motion in it like the Sun; ſaith he, It hath ſo, and more to Confirm you, ſays he, look what abundance of Little Suns, Round like a Globe, appear to us every where, juſt the ſame Motion as the Sun makes in every one's Eyes: So we concluded, the Sun could be nothing elſe but a very Solid Body of Salt and Sulphur, Inflamed by his own Violent motion upon his own Axis; and as he Shoots out Beams of Comfortable

Salt

Salt, to Inliven every thing, ſo he Draws Proportionably from every thing, which keeps him at one Conſtant Being, like the Sea, whoſe Vapors are Drawn up and Fall down Equally, and ſo can be neither Bigger nor Leſs, for it is not the Banks that can keep it in, but whereſoever it Overflows, it Loſeth as much in ſome Part of the World.

The Sun is Pure without any other Mixture, but what I have ſpoken of; they talk of a Fire in the Earth, and a Sun in the Earth, which I believe is Salt, but mingled with the Groſs Body of the Earth, which the Sun is not, but of the Pureſt Matter.

I confeſs, that I am apt to believe with *Galileo*, that all the Planets are Worlds, and am alſo of *Copernicus*'s Opinion, that the Sun ſtands ſtill, and the Earth goeth about, and I believe all the Fixed Stars are Suns, for they have the ſame Twinckling motion in them that the Sun hath, which the Planets have not, but a Second Light, and no doubt but there are many Planets about thoſe Fixed Stars, which I think are all Suns.

This is my Opinion, which I think can as hardly be Diſproved as Proved, ſince any Opinion may be Right or Wrong, for any thing that any body knows, for certainly there is none can make a Mathematical Demonſtration of Natural Philoſophy, and ſo I leave it to the Mercy of my Readers.

W. Newcastle.

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ERRATA.

IN the ſecond Epiſtle to the Reader, page *penult.* thereof, line 18. leave out, *without Subſtance. Ibid* line 22. for *Subſtanceleſs* read *Violent.* In the Preface, page *penult.* line 15. read *Figures.*

Page 7. line 8. for *all of the Matter* read *all the Matter*, page 4. line 1. for *and* read *an*, page 17. line 28. for *Principal* read *Principle*, page 21. line 12. for *Producer* read *Producers*, *ibid.* line 18. read *Incorporateth*, page 34. line 6. for *bounds* read *binds*, page 36. line 26. read *is in a perpetual Motion*, page 37. line 11. for *in* read *is*, *ibid.* line 17. leave out *to*, *ibid.* line 20. after *diſpenſe* ſet *and*, page 40. line 21. for *reading* read *resting*, page 45. line 25. read *Self-motion*, page 46. line 1. leave out *as*, page 47. line 18. for *compoſed* read *compaſſed*, page 52. line 18. read *There are ſo various Motions*, page 53. line 20. for *but I ſhall* read *I ſhould*, page 54. line 16. for *Womb* read *Parts proper for it*, page 74. line 12. for *Creature* read *Creator*, page 76. line 4. for *won* read *loſt*, *ibid.* line 12. for *or* read *and*, page 83. line 26. after *quite* ſet *different*, page 88. line 4. after *whole* make a ſtop, page 90. line 1. after *thoughts* leave out the ſtop, page 106. line 24. for *this, is* read *this is*, page 110. line 5. read *Figurative*, *ibid.* line 13. read *Sympathize*, page 113. line 4. after *Certainly* ſet *In*, page 116. line 2. for *or* read *and*, *ibid.* line 4. read *and ſome degrees*, page 119 line 26. read *ſome have high fore-heads*, page 120. line 14. leave out *after*, page 144. line 24. for *ruggedneſs* read *ſmoothneſs*, and line 25. read *ſofter or harder*, page 146. line 9. leave out *In*, page 157. line 12. after *wetneſs* ſet *is*, page 169. line 15. read *Retentive*, page 176. line 19. for *the* read *there is*, page 182. line 31. for *her* read *their*, page 197. line 14. for *Circular* read *Circle*, page 200. line 31 leave out *the*, *ibid.* line 28 leave out *the*, page 206. line 18. read *ſtick*, page 210. line 14. for *in* read *is*, page 225. line 15. after *Circle* read *it*, page 227. line 10. read *be extended*, page 233. line 3. read *as for Vegetables*, page 243. line 5. for *animated* read *Interior*, page 262. line 20. read *Diſorder*, page 265. line 12. read *Inanimate matters mixture*, *ibid.* line 24. for *with the Ear* read *with the Inanimate in the Ear*, page 268. line 14. for *greatly* read *greedily*, page 270. line 22. for *the* read *they*, page 272. line 21. after *Senſe* ſet *and*, page 281. line 22. for *Arts* read *Parts*, page 284. line 8. after *Pencilling* read *and*, page 287. line 27. for *in* read *and*, page 289. line 12. read *Senſitive Animate matter*, page 291. line 6. for *their* read *its*, page 297. line 22. for *draw lines* read *drawing Motions make Lines*, page 301. line 4. read *of the Candle*, page 302. line 24. for *make ſtops* read *ſtop*, page 306. line 29. leave out *Not*, page 317. line 13. leave out *as*, page 331. line 17. for *about* read *In*, page 332. line 12. for *for* read *in*, page 344. line 19. read *and breaks not quite out*, page 345. line 7. leave out *which*, page 361 line 18 leave out *a*, page 392. line 8. read *to the head*, page 400. line 24 read *are one ſort*, page 417. line 16. read *Cold and Froſt*, page 419. line 26. read *Bright-ſhining*, page 424. line 1. read *Looſe and unſteady.*